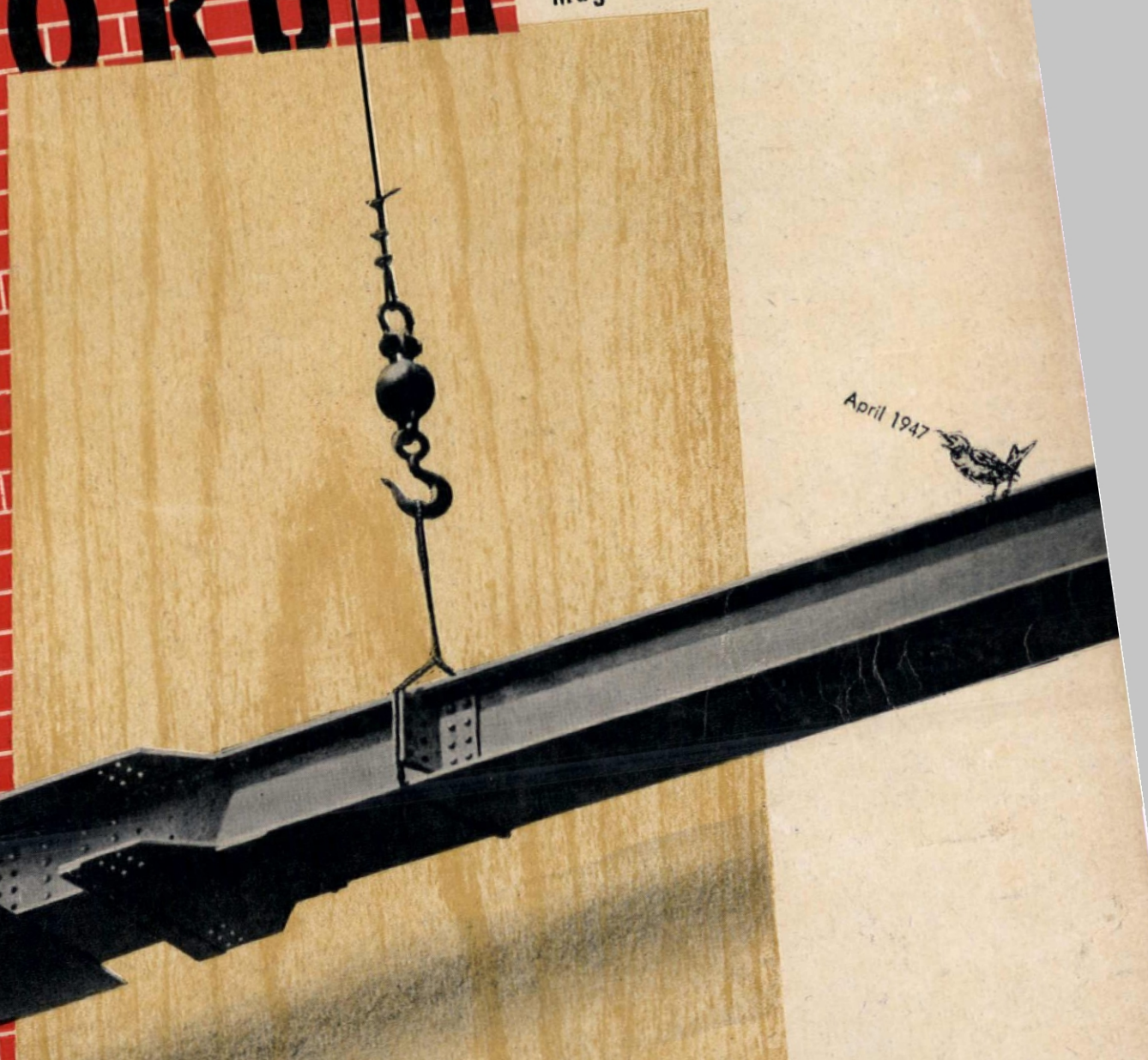
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FORUM

Magazine of Building

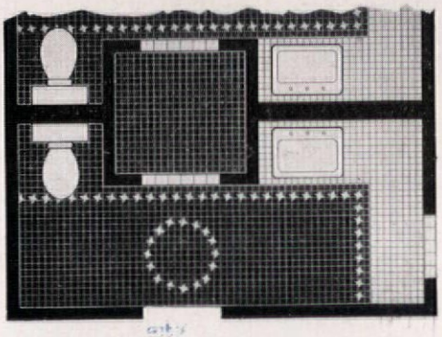
April 1947







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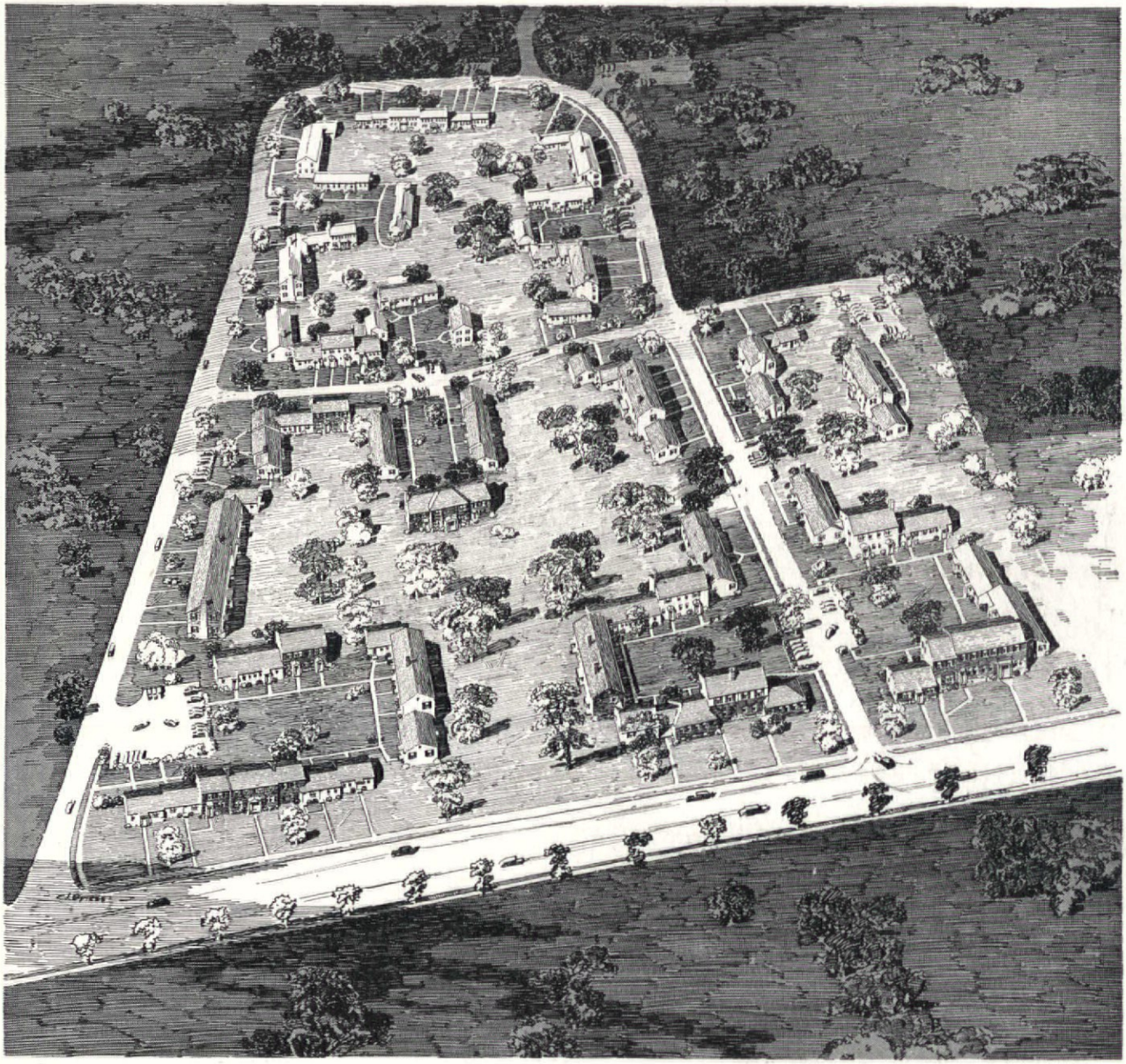
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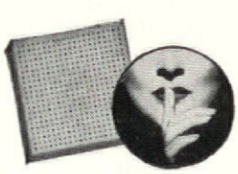
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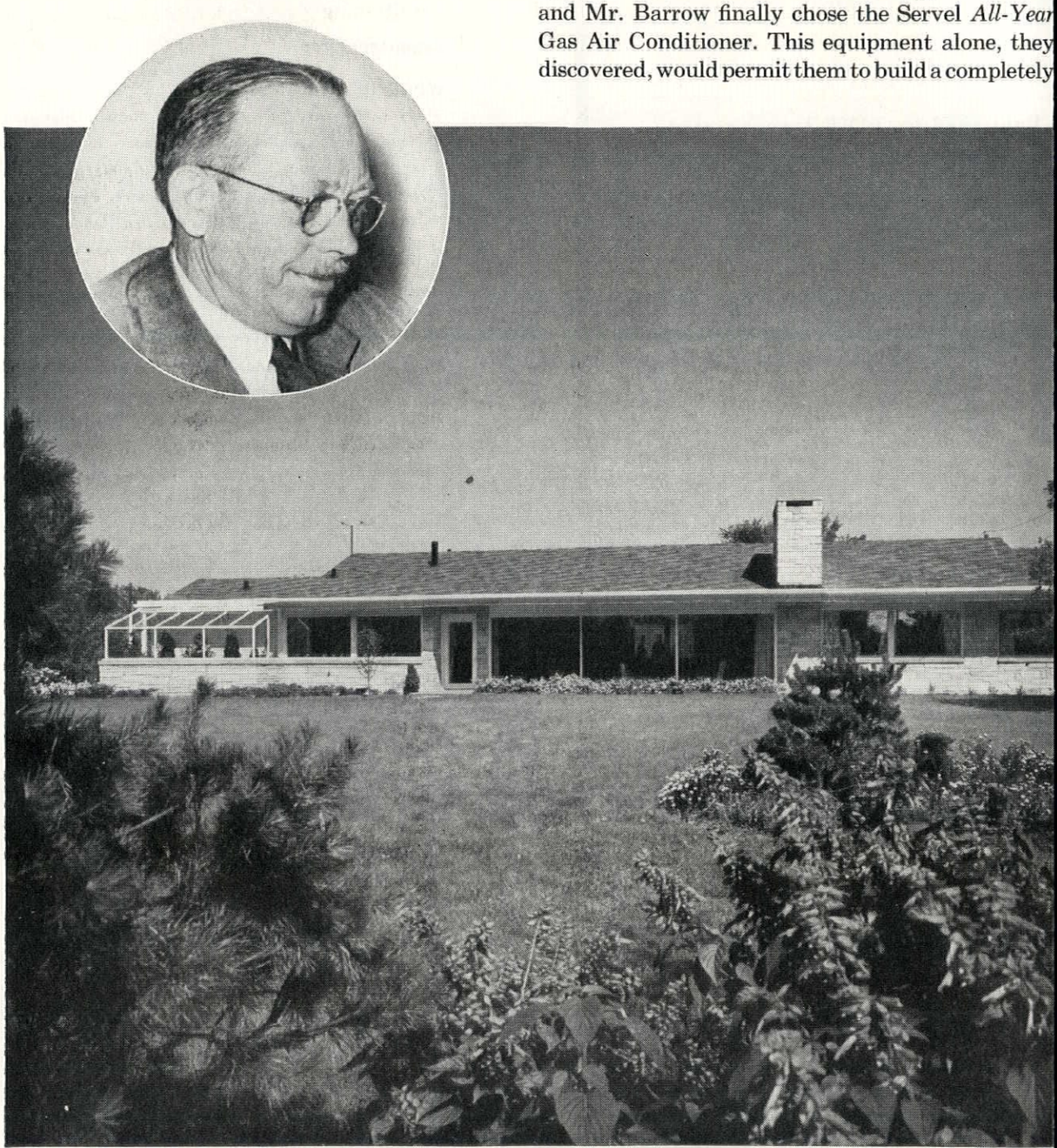
Cover by Geng Federico

Now... a home completely

Greater construction efficiency and year-round comfort made possible by Servel All-Year Gas Air Conditioning

When Howard M. Sloan commissioned architect David S. Barrow to design his new home, he was particularly anxious to maintain an ideal indoor climate the year round.

After careful investigation of every available type of residential air conditioning, Mr. Sloan and Mr. Barrow finally chose the Servel *All-Year* Gas Air Conditioner. This equipment alone, they discovered, would permit them to build a completely

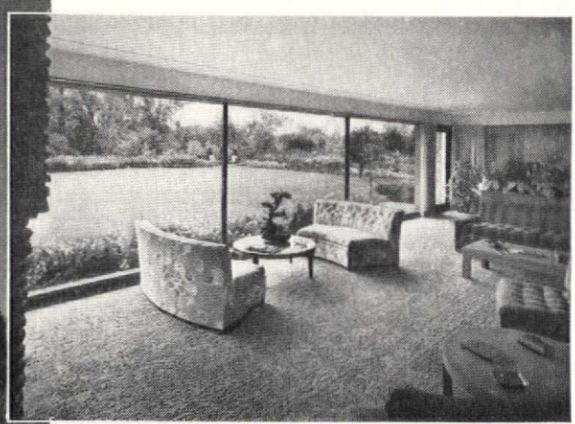


sealed!

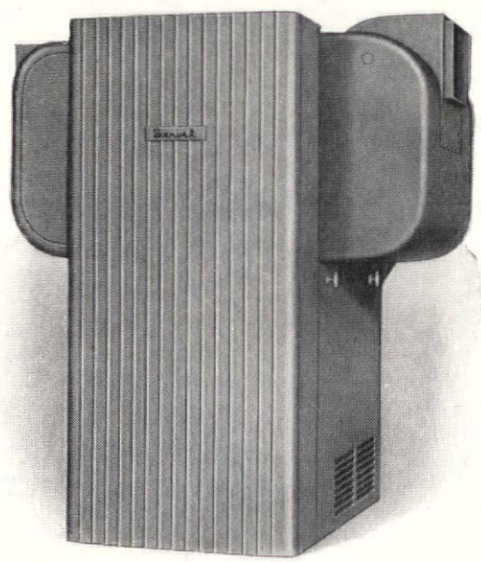
sealed home. One compact unit, it not only provides an ideal indoor climate in summer, but winter heating and humidification as well. And draft-free circulation of cleaned air the year round, too.

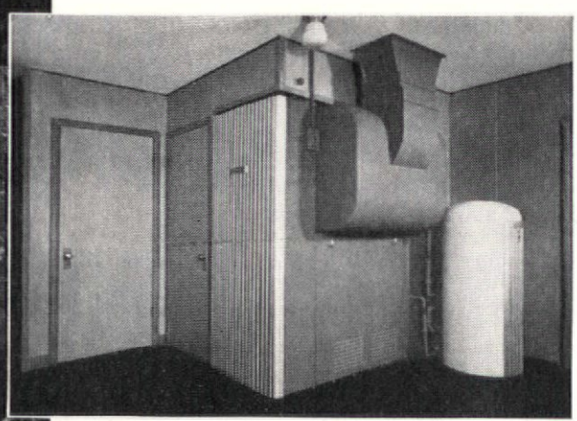
Achieving year-round freedom from oppressive weather did not add to the cost of the house. For, Mr. Sloan states, "The use of fixed windows and the elimination of window screens, window hardware, weather stripping, a screened porch, and other economies in design and construction made possible by the Servel *All-Year* Gas Air Conditioner actually made it cost little, if any, more than an ordinary heating system!"

The Sloan house is one of the first specifically designed and built to take *full* advantage of the "new quality of living" made possible by Servel *All-Year* Gas Air Conditioning. Whether or not you plan to build a sealed house, it points the way to greater livability which you can design into any home—without appreciably increasing the cost. For full information about Servel *All-Year* Gas Air Conditioning get in touch with your local Gas Company, or write to Servel, Inc., 2704 Morton Ave., Evansville 20, Indiana.



LIVING ROOM of Sloan's new home in Glenview, Ill., features indoor-outdoor living with three panes of glass, each seven feet high by nine feet wide, opening on rear terrace.





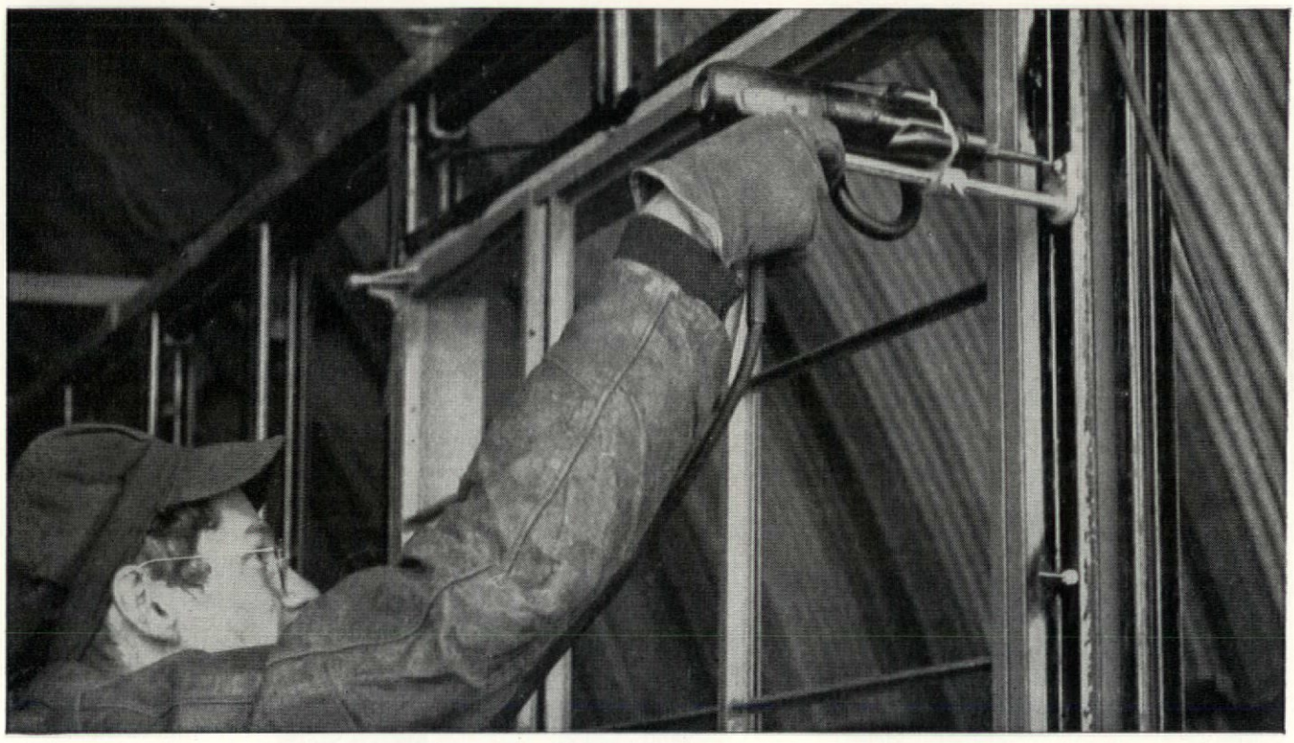
IN ADDITION to Servel *All-Year* Gas Air Conditioning and Servel Gas Water Heater, shown above, the Sloan house contains Servel-designed New Freedom Gas Kitchen and Servel Gas Refrigerator.

TRIED . . . PROVED . . . SUCCESSFUL

From Boston to San Diego
. . . From Bismarck to Miami

The *All-Year* Gas Air Conditioner is already operating successfully in hundreds of installations from coast to coast . . . some for more than four years. It is tried, tested and *approved* by users everywhere.

Servel
All-Year
GAS AIR CONDITIONER



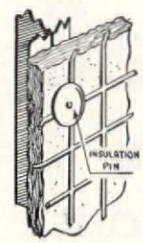
The "Gun" that helped get a better house to market faster, at lower cost...

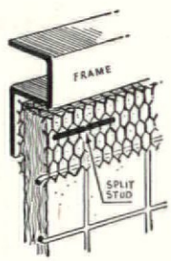
THE PROBLEM...

The Byrne Organization developed a fine steel-framed, fully-insulated house designed for efficient production. Applying collateral materials (metal lath, Fiberglas insulation, stucco reinforcement mesh) to the jig-welded wall panels by usual methods proved slow and costly. A better, faster method was needed in order to get this quality home to market in quantity, at reasonable cost.

THE SOLUTION...

Nelson Automatic Stud Welding provided a "trigger-quick" solution. The Fiberglas insulating board and wire-reinforced building paper used under the exterior stucco is secured with Nelson large-headed insulation pins "shot" through to the steel frames as illustrated in sketch at right. Nelson split studs are welded at intervals along wall ends, top and bottom plates, window and door casings.





Pre-cut sections of vapor seal and metal lath are impaled over the pins. Fiberglas board is impaled, the metal-lath bent around it and secured by bending the pin prongs as shown in sketch above.

THE RESULTS...

In a test run with former methods, it took 4 men and a superintendent a full day to complete a wall panel. With Nelson stud welding, four men and a stud gun operator did the job in 2 hours!

*** FACTS ABOUT NELSON STUD WELDING ***

The 5-lb. Nelson "gun" is completely automatic in operation, and can be powered by any suitable portable or stationary d.c. welding generator. It arc welds Nelson flux-filled studs from 1/8" through 3/4" in diameter, up to 8" long, in *any* position. No special skill or training is required to operate this "tool of the trade"; operators average 100 to 200 stud welds per hour.

Present Nelson applications on steel construction include the securing of corrugated asbestos or metal roofing and siding, piping, conduit, sprinkler hangers, all types of insulation, metal lath and most collateral materials.

YOUR COPY'S WAITING!



The New 1947 Nelson Catalog and Data Book fully describes automatic stud welding equipment, studs, design factors and scores of specific applications. Your copy's waiting—write for it *NOW!*

NELSON SALES CORPORATION

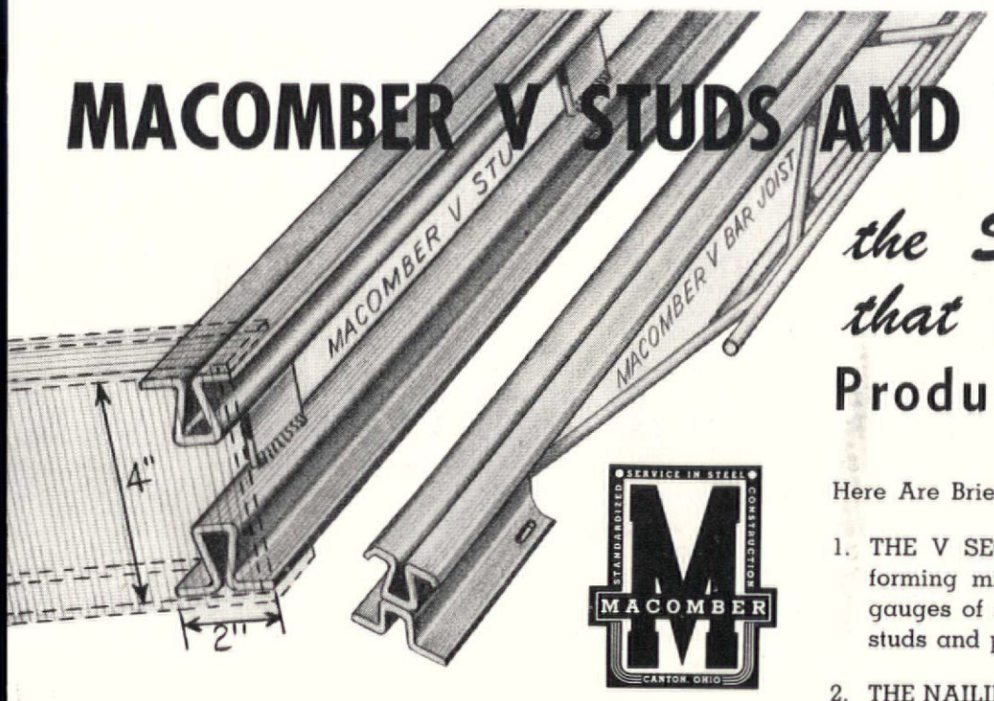
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Representing: NELSON STUD WELDING CORPORATION, Lorain, Ohio • NELSON SPECIALTY WELDING EQUIPMENT CORPORATION, San Leandro, Calif.

NELSON TRADEMARK

MACOMBER V STUDS AND V BAR JOISTS

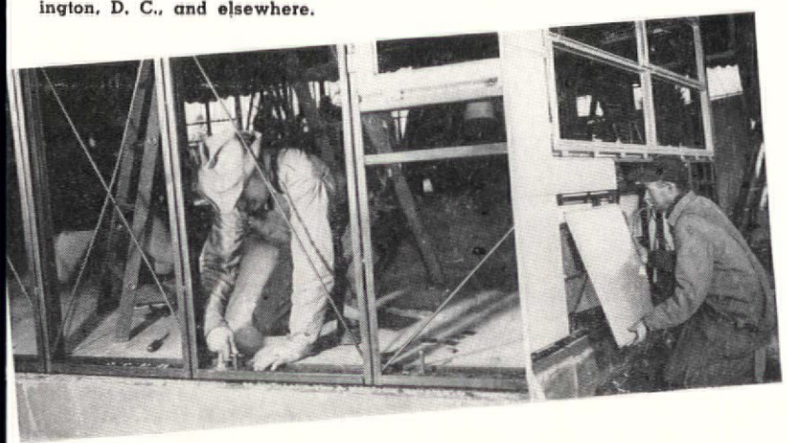
the Steel Sections that Solved "Line Production" Housing



Typical of the 1250 House Harundale Project of the Byrne Organization. Steel Framing of Macomber V Sections fabricated into wall panels.



These examples of Macomber V Section fabricated Wall Panels are typical of many installations under contract including Hancock Village, Brookline, Mass., an 800 Apartment House project of John Hancock Life Insurance Co. and elaborate multiple family units in Washington, D. C., and elsewhere.

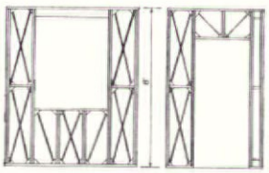


The Lustron House as produced by the Lustron Corporation is steel framed with Macomber shop fabricated V Section Wall Panels and finished inside and out with Lustron Porcelain Enamel Steel Plates.

Here Are Brief Facts:

1. THE V SECTION — rolled on a continuous cold forming mill in the Macomber plant from heavy gauges of strip steel in the various sizes for joists, studs and purlins.
2. THE NAILING FEATURE — throughout every linear foot provides solid attachment for wall, ceiling, floor and roofing materials — direct to the steel section.
3. SHOP FABRICATION — of complete wall and partition panels with door and window openings all framed ready for erection.
4. DESIGN LATITUDE — for the architect and structurally for loading conditions in single and multi-story dwelling units.
5. AVAILABILITY — produced over the past year in volume for large contracts, capacity now being scheduled for 1947.

Here is a typical V Stud shop fabricated panel as delivered for fast erection at the building site.



This is the light weight Macomber Roof Truss fabricated from V Sections to specifications.



These light steel sections can be economically combined for the steel framing of a wide variety of light occupancy buildings on a quantity basis. For single or multiple family units, filling stations, utility and storage buildings here is proved structural engineering applied to light occupancy needs. Macomber offers prompt service in the application of its products. Contact us.

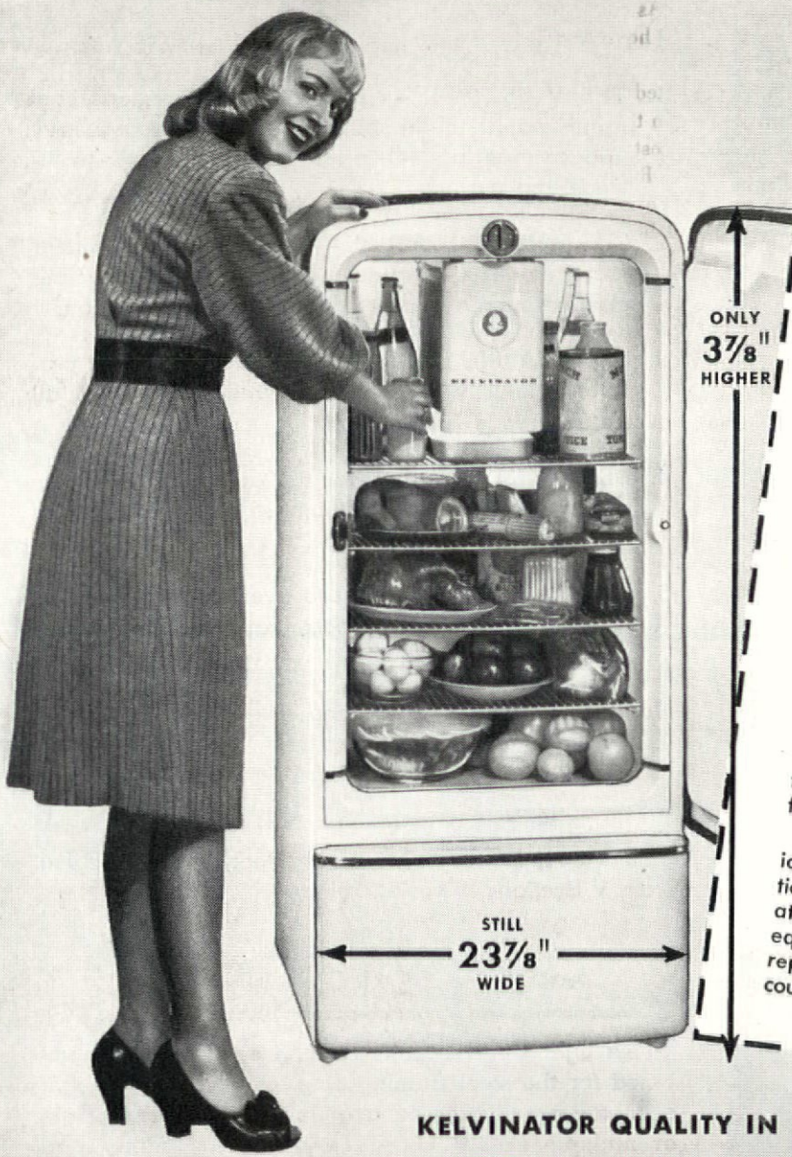
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BAR JOISTS · ROOF PURLINS · STEEL STUDS · LONGSPANS · ROOF TRUSSES · STEEL DECKING & SIDING

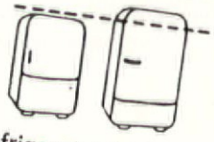
Here's the Big News for Apartment House Owners and Builders!

Kelvinator's "SPACE SAVER"!



Holds 50% more . . . yet takes no more floor space!

6 cu. ft. of storage instead of 4 cu. ft.



Here's the refrigerator that's specially designed to dovetail perfectly into the small kitchens of modern homes and apartments . . . a world of storage in a minimum of floor space! By actual measurement the new SPACE SAVER is no wider than the previous 4 cu. ft. model, and only 3⅞ inches taller — yet it provides full 50% more storage than the previous model—6 cu. ft. as compared to 4!

There are 5 full width shelves, and most important, more space between shelves. It's a real family-size refrigerator . . . and it stars every exclusive Kelvinator feature — from the smooth trim of its gleaming white Permalux finish to the Kelvinator Polarsphere Unit — the matchless cold maker with the trouble-free record.

This is the "little" refrigerator with the *big* ideas for builders and owners! For full information on the new **SPACE SAVER**, write Nash-Kelvinator, Detroit 32, today. If your problem is to equip a modern space-saving kitchen, or to replace inadequate refrigeration anywhere—count on Kelvinator's new **SPACE SAVER!**

KELVINATOR QUALITY IN EVERY FEATURE!

High Speed Freezer — Made of stainless steel for permanence, beauty . . . faster, concentrated cold. Ample room for frozen foods, too!

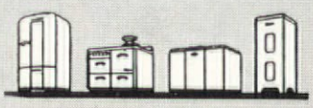
Room for Tall Bottles — Extra room for tall bottles on both sides of freezer. Greater height between shelves increases storage.

Handy Chilling Tray — Dual purpose, chilling and defrosting tray. Large capacity, unbreakable, drawn aluminum container.

Sturdy Shelves — Made of closely spaced, welded steel bars, plated to keep their brightness. Dishes slide easily but won't tip over.

Beautiful Exterior — Made of welded steel with a lustrous, long-wearing Permalux finish. Stays white . . . completely stain-resistant.

Kelvinator



DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT

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BUILDING MONTH. Like the thud of the riveters' guns against the steel framing now mounting all over the U. S., one persistent question drummed in every Building man's ears: "What about prices—prices—prices?" The specter of a boom building market priced out of existence had overhung the recent home builders meeting in Chicago and Congressional hearings on building matters in Washington—just as it had sat uninvited at every conference between Building customer and Building contractor for the last year.

Building had heard plenty of evidence that the price crisis was at hand: The American Legion's housing spokesman told a Congressional committee that some 200,000 over-priced new houses are now sitting around waiting for buyers (he based this estimate on conversations with home builders at their Chicago meeting). Federal permits to build houses for veterans fell off to 47,512 in February, as compared with 73,273 in January—usually the worst month of the year. Said the Bell Savings & Loan Association, which has kept its ear to the building heartbeat in the Chicago region for decades: "As compared with last year, permits to build houses have slumped deplorably."

Long Island builders predicted an 80 per cent drop in home construction this year—and blamed it on the high cost of labor. The National Association of Real Estate Boards' survey confirmed what every broker has known for some time: the buyers' rush for existing houses is definitely over; prices of such houses will fall this year. Big industrial and commercial contractors reported that a large volume of work was being indefinitely delayed by price uncertainties (FORUM, March '47).

Against this doleful background promising disaster, last month brought the first and enormously encouraging sign that the price crisis in Building was curing itself in the way it always has: the BLS index showed that wholesale building materials prices, which rose sharply after decontrol, now seemed to be leveling off. It was still too early to say decisively that this was the beginning of a price drop or of price stabilization. But the statistical facts were optimistic: in three of the four weeks ending March 15, there was practically no change in the building materials price index. As a result, building materials prices increased over this four-week period only 1.3 per cent, as compared with an average monthly increase of 6.7 per cent between price decontrol and February 15, 1947. In the week ending March 22, all building material prices held steady except lumber, which rose 1.9 per cent. BLS experts thought this was probably the last flurry, and said it was caused by price adjustments of the last few reporting lumber firms to earlier price increases of other firms.

This was big news, and there was more to back it. Counterbalancing the long-faced reports of a construction fall-off was the fact that volume of new construction for the first quarter of this year amounted to $2,340,000,000—as compared with $1,600,000,000 for the same period last year. This rise was even more significant in the light of the BLS estimate that last year's $4.7 billion total of city building was the biggest dollar value of any year since the twenties (part of this, of course, had to be discounted by the price rise).

Federal recorders also said that state-financed construction is running about 3½ times what it was last year, that municipally-financed construction has more than doubled. Builders reported that construction time was at last shortening and that overhead margins for contingencies and delays were dropping in direct proportion to the accelerated pace of building. Few builders now had unfinished construction on hand, and the end of desperate bidding for short items to finish a job was one reason why the price picture showed signs of stabilization.

Building men proposed other ways to get prices in balance. The National Electrical Contractors Association called for a return to a firm price and delivery schedule. "The escalator clause is a wartime pricing device which has no place in a peacetime economy," NECA said. Following the lead set by Ford and International Harvester, Milcor Steel Co. announced price reductions of up to 20 per cent (from prewar prices) on its line of louver ventilators.

One big remaining question: how much help in price stabilization could be expected from the building trades? It seemed impossible that the unions would continue to drive for wage increases that threatened to price their own product out of the market. On the other hand, nobody could safely predict any reduction in labor costs or tell how soon greater labor productivity could be expected.

But, in spite of this and other uncertainties, March brought more signs than any recent month that 1947 might yet mark the beginning of the full production for which Building—and Building customers—had waited for many a lean year.

WASHINGTON

CONTROLS MAY STAY

Congress seems to be changing its mind about building freedom.

There were two big reasons why the Congressional push to kill off remaining building and rent controls was losing its momentum. The most immediate of these was last month's flip-flop made by conservative veterans' groups. After registering approval of the home builders' drive for complete building freedom, veterans' spokesmen last month about-faced to tell Congress that all controls must stay—with the exception of rent control on new construction.

The second big reason, although not so immediately apparent, is that U. S. aid to Greece and Turkey (probably to be followed by aid elsewhere) may require

Oscar Associates





HOME BUILDERS convening in Chicago plugged for dropping all building controls, including curb on nonresidential construction. They heard Housing Expediter Frank Creedon and FHA chief Raymond Foley (right). Speakers' table (below): Treasurer, Milton J. Brock, Los Angeles; retiring president Joseph Meyerhoff, Baltimore; new president Edward Carr, Washington, D. C.; executive vice-president Frank Cortright; Rodney Lockwood.

tighter control of some parts of the U. S. domestic economy than had been anticipated. When the U. S. steps into Britain's place in helping western Europe rebuild, it will confront an increasing drain on its iron and steel production. What this will mean to domestic steel users is not yet clear. One thing Washington experts predicted it could mean is continuation of a steel allotment and channeling system. This means the government would decide how much steel Building would get and how it would be allotted among various types of construction. Last month the Commerce Department quietly called in representatives of the major steel-using industries to measure the effect at home of increased steel shipments abroad.

This is why Representative Jesse Wolcott's bill to revoke substantially all the provisions of the Veterans' Emergency Housing Act (with the exception of FHA Title VI insuring authority) will probably not pass Congress. Wolcott had told the home builders he hoped "to free American industry from the shackles of government controls," and Congress as a whole heartily endorsed this objective. But realistic necessity both at home and abroad was making it apparent that some controls might have to stay far longer than anybody—Congress, the industry or the public itself—wanted.

The future of rent control was taking the same turn. The House Banking Committee backed a 10 per cent flat increase, but the Senate Finance Committee approved a bill to extend rent control with no increase. (Complained realtors' Herbert Nelson: "The Senate will do anything to get this hot political potato out of its hands without doing justice to the property owner.") Both Committees, however, agreed that new construction should be exempted.

PUBLIC HOUSING THIS YEAR?

Bill probably won't pass House.

Senator Robert Taft comes from Cincinnati, and he knows what a slum is like. Representative Jesse P. Wolcott comes from the sugar-beet country around Port Huron, Mich., where most of his farmer constituents think the only reason a man lacks a decent house is that he doesn't work hard enough. Between these two Republicans—the boss of the Senate and the powerful chairman of the House Banking Committee—hangs the fate of the new Taft-Ellender-Wagner housing bill (S. 866) introduced last month. The leadership of Senator Taft would probably assure passage in the Senate. The indifference of Representative Wolcott would probably assure a blind alley in the House.

Wolcott had already said he saw no reason why the housing bill couldn't wait until next year. (This time the bill will not die at the end of the current session, as its predecessor did when the 79th Congress expired.) His committee, Wolcott complained, was snowed under. There were, for example, the hearings on his own bill to repeal most of the remaining war building controls (see above). And there was the matter of extending the RFC; this, the Congressman thought, could be done only after a comprehensive examination of all federal credit practices.

Although realtors' chief Morgan Fitch had called the public housing bill the "spearhead of the Communist front," Senator Taft was painstakingly trying to explain to Congress exactly why he thought federal aids for low-rent housing and for some types of private building enterprise made good business sense. The Senator said that simple arithmetic led him to a simple conclusion: "The market for new houses is confined to half of the population. Private enterprise builds up to the point of exhaustion of the upper income market and then construction falls off."

The Senator made it clear that he thinks about as much has been done in reducing financing costs on privately built houses as is possible. Any further efforts to lower housing cost should deal with construction cost—"a job that hasn't been touched yet." He said he felt some hesitancy about the yield insurance provision of the bill and conceded that life insurance companies, the only type of lender who could conceivably make use of it, are not much interested. But he hoped that the insurance lenders "might come in and tell us under what changes they might use it."

By the month's end, the bill had been endorsed (with qualifications) by the

JEFFERSON MEMORIAL COMPETITION

An open two-stage architectural competition for a $30 million federal memorial to Thomas Jefferson has just been announced. The memorial is to built on an 80-acre site, already cleared, in the downtown center of St. Louis riverfront (such a redevelopment proposal was published by FORUM, April, '44). Prizes amount to $125,000. Five competitors will be qualified for the second stage of the competition. Applications may be obtained from: George Howe, professional adviser, Jefferson National Expansion Memorial Competition, Old Courthouse, 415 Market Street, St. Louis 2, Missouri.

Oscar Associates





NATIONAL PUBLIC HOUSING CONFERENCE also gathered in Chicago, applauded for T-E-W bill: (l. to r.) executive vice-president Lee Johnson, president William Guste, FPHA chief Dillon Myer, Philip Glick, Edward Weinfeld, Warren Vinton, Catherine Bauer.

. I. A., who had also decided to shelve heir own urban redevelopment bill for the me being and get behind the T-E-W bill. t had also been endorsed (with enthusism) by the conservative Veterans of oreign Wars, and this endorsement would eigh heavily with Congress.

In general, the new bill was not much ifferent from last year's omnibus housing ill (FORUM, Nov. '45). Main changes:

Provision is made for a coordinating gency, the National Housing Commission. his policy-making body would replace he present National Housing Agency and ould be required to act with the active dvice and assistance of a coordinating ounsel composed of the heads of all other ederal agencies having any kind of finger n the housing pie.

Favored FHA treatment for mutual ownrship corporations has been dropped.

Annual federal contributions for low-rent ousing have been stepped up to $26.4 illion (as compared with $22 million in he old bill) to take care of increased contruction costs.

Requirements for federal grants to aid ities in assembling land for redevelopment ave been tightened.

BUILDING MONEY

CONNECTICUT MUTUAL AHEAD

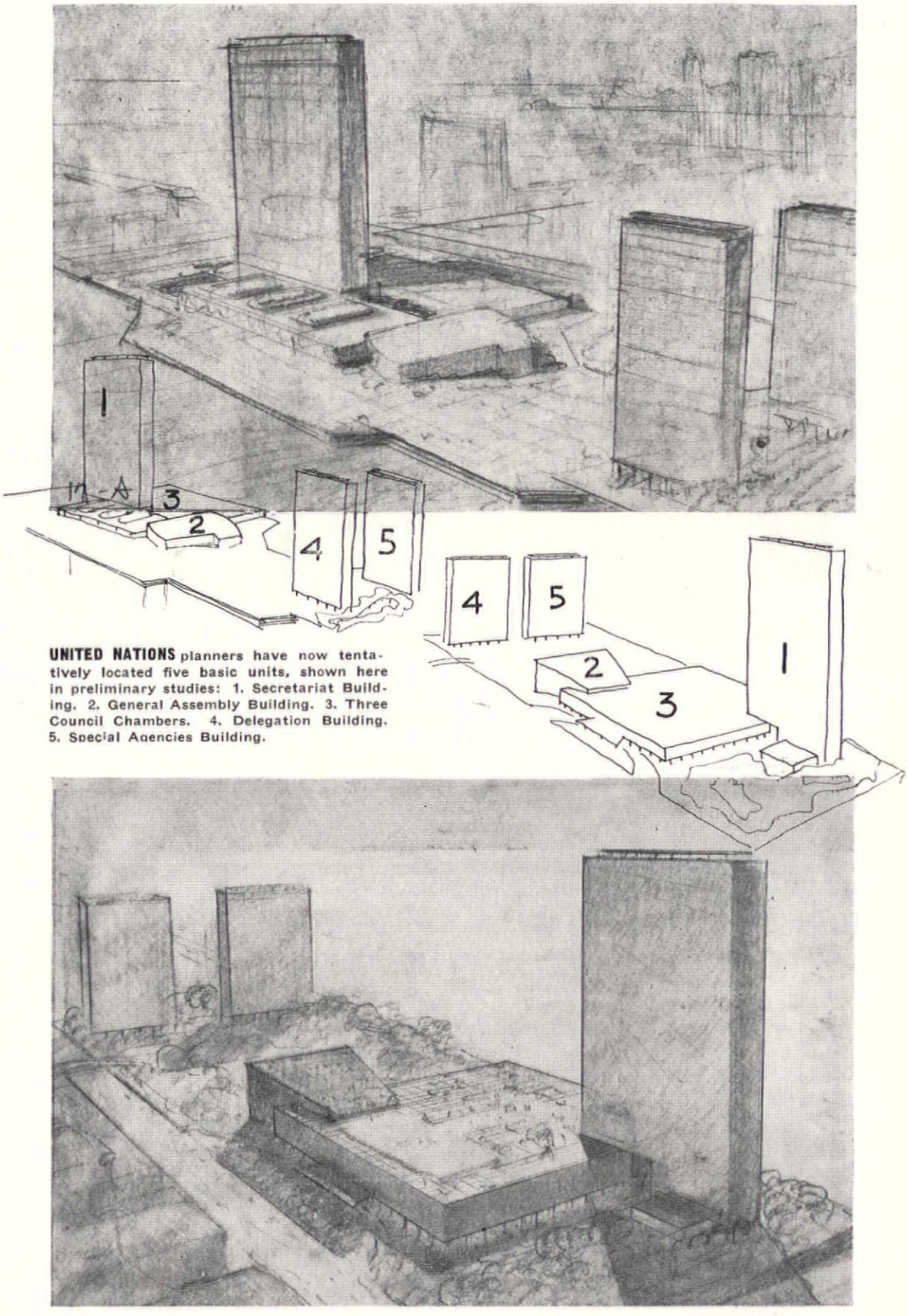
New type of insurance investment.

The ink was scarcely dry on the Connectiut law permitting insurance companies to nvest 5 per cent of their assets in direct wnership of real estate when the Connectiut Mutual Life Insurance Co. moved last ear to start an $8 million apartment roject in Hartford. This trigger-quick esponse (which other Connecticut companies have not yet followed) was due to Mutual's alert president, Peter M. Fraser, who had worked hard to secure the law broadening insurance investment opportunities.



FRASER

Last month Fraser and Mutual were again leading the field with a type of investment building no insurance company has yet tried: a medical-dental building to adjoin the almost-finished Hartford Hospital. This building will have the advantage of an underground passage connecting with the hospital, saving doctors' time and making hospital laboratory facilities readily available for office patients. Hartford Hospital was so delighted by this building project that it sold Mutual the site for exactly what it paid in 1932—$75,000. Construction will start whenever CPA gives permission. Building cost is estimated at under $1 million. Moore & Salsbury, Hartford, are the architects.



UNITED NATIONS planners have now tentatively located five basic units, shown here in preliminary studies: 1. Secretariat Building. 2. General Assembly Building. 3. Three Council Chambers. 4. Delegation Building. 5. Special Agencies Building.

UNITED NATIONS: FIVE BASIC BUILDINGS LOCATED

Locating the United Nations buildings on their midtown Manhattan site required a solution which would give dominance to the General Assembly building, a horizontal structure, over the Secretariat building, necessarily a vertical one. Rought sketches shown above were part of dozens of preliminary studies. Last month planning director Wallace Harrison said that UN architects had reached tentative agreement on the site plan. This tentative plan calls for a plaza the full width of the site, with the 40-story Secretariat building to be located on the southern portion, the General Assembly chamber and two 35-story buildings to house delegations and special agencies on the north end.



PLANNERS' PLATFORM: Top-rank professionals spend two days talking about what kind of environment they would plan for modern society — if they had a chance.

The galaxy above, lined up for their photo outside the Princeton Inn, constituted an unprecedented assembly for an unprecedented purpose. Princeton University, marking its 200th year, had invited the foremost U. S. architects and planners to spend two days talking about Planning Man's Physical Environment.

The Physical Environment which the architects were invited to consider had changed at a terrorizing velocity within their working lifetimes. The expanding universe had become the exploding universe, and time, the new Fourth Dimension, had become more ponderable than any of the other three. Man had changed, too, but not enough. The architects showed that their buildings had felt the now decisive effect of Time and its mirror, Motion — but Man emerged under their inquiring stare as a creature bent by the relentless past, confused by his vestigial emotions, and so handicapped by defective vision that he literally can see only what he wants to see.

Princeton had done its scholarly best to assist the architects in pinning down their racketing Physical Environment to a feasible point for two days' discussion. It had distributed mimeographed lists of "axioms and assumptions." It had, with professorial zeal, put mimeographed questions. (Sample: "What are the forces in design and composition which tend to harmonize objects of the same or varying character?")

Princeton had also invited as talkative and brilliant and opinionated group as had ever sat down together. (Among them it had

(Continued on page 14)

RALPH WALKER, Voorhees, Walker, Foley, Smith, N. Y. C.; represents firm on UN headquarters commission.

JOHN E. BURCHARD, professor, director of Albert Farwell Bemis Foundation, M. I. T. Government consultant on prefabrication and modular standards.

ROBERT O'CONNOR, architect, Princeton. With Trowbridge & Livingston, Hyde & Shepherd.

J. V. HUDNUT, dean School of Design, Harvard. Practiced, N. Y. C. dean, architecture, Columbia. Taught Alabama Polytechnic, University of Virginia.

ADELBERT AMES, JR., Director of Dartmouth Eye Institute, research professor in psychological optics.

RICHARD NEUTRA, architect, Los Angeles, City planner, Switzerland. With Holabird & Root, Frank Lloyd Wright. Consultant: FWA, FPHA.

HENRY S. CHURCHILL, Architect, New York. Consultant N. Y. State Division of Housing, U. S. Housing Authority.

WALTER GROPIUS, chairman, school of architecture, Harvard. As founder of the Bauhaus design center at Weimar, a dominant force in functional design throughout the world. London practice with Maxwell Fry.

ARTHUR HOLDEN, Holden, McLaughlin & Associates, N. Y. C. Consultant, N. Y. State Board of Housing, author.

JOSE LUIS SERT, city planning consultant, N. Y. C. Founded modern design group, Barcelona. Spanish Pavilion, Paris Fair. Inventor (with Paul Weiner) prefab system, Ratio Structures.

ARTHUR E. MORGAN, engineer, Community Service Inc. Yellow Spring Ohio. President, Antioch College. Chairman, TVA.

ALVAR AALTO, pioneer in function design of plywood furniture. Finnis Pavilions, Paris Exposition and N. World's Fair. Now teaching architectu at M. I. T.

GEORGE HOWE, architect, Philadelphi Co-architect of the most famous (amon the profession) U. S. office building Philadelphia Savings Fund Socie building. N. Y. World's Fair building Supervising architect, PBA.

FRANK LLOYD WRIGHT, architect, Sprin Green, Wis. Worked for Louis Sulliva started his own practice in Chicago 1893. Masterpieces: Imperial Hote Tokyo; Johnson Wax building, Racin "Falling Water" house, Pennsylvania Guggenheim Museum (in plan), N. Y.

SHERLEY W. MORGAN, director, school architecture, Princeton, where he joine faculty in 1915.

LIANG SSU-CH'ENG, design consultan UN headquarters; visiting professo Yale. Chairman, just-started Departme of Architecture, T'sing-Hua University.

JEAN LABATUT, professor, architectur chairman, Bureau of Urban Researc Princeton. Design consultant N. Y. Fai

FRANCIS A. COMSTOCK, associate pr fessor, architecture, Princeton; chai man, city planning board.

WALTER BAERMANN, industrial designe N. Y. C. Former head of industrial d sign, Cranbrook Academy. With Josep Urban, Norman Bel Geddes, Henry Dre fuss, Howe and Lescaze.



Ben Schnall

LAWRENCE A. KOCHER, lecturer, art, William and Mary. Head, School of Architecture, University of Virginia. Editor, *Architectural Record*, 1927.

HOWARD P. VERMILYA, vice-president, American Houses. FHA technical director, ten years.

FRED N. SEVERUD, engineer, N. Y. C. With James B. French, Republic Fireproofing Co. Major jobs: Tripler General Hospital, Hawaii; CBS Studios, Los Angeles.

THEODORE M. GREENE, professor, philosophy, Yale.

WALTER A. TAYLOR, director, education and research, A.I.A. Taught in many universities. Buildings in 25 states, 7 foreign countries.

GYORGY KEPES, professor, architecture, M.I.T. Taught, Chicago Institute of Design, Brooklyn College. Bauhaus.

B. KENNETH JOHNSTONE, dean, art, Carnegie Institute of Technology, University of Illinois, Yale, Pennsylvania State.

KONRAD WACHSMANN, president, General Panel Corp. Started prefab experiments while chief architect of largest European wood-working factory.

MARCELO ROBERTO, architect, Rio de Janeiro. Brazilian Press Association building, airport hangars, apartment buildings.

LEOPOLD ARNAUD, dean, architecture, Columbia. With Warren & Wetmore and Voorhees, Gmelin & Walker.

KENNETH STOWELL, editor, *Architectural Record*. Former editor, *Architectural Forum*, *American Architect*, *House Beautiful*.

HENRY L. KAMPHOEFNER, professor, architecture, University of Minnesota. Practiced, Sioux City. Experimental housing for Resettlement Administration. Known for Grandview Music Pavilion.

G. E. KIDDER SMITH, architect, N. Y. C. Guggenheim Fellow for study of Swedish and Swiss architecture. Co-author: *Brazil Builds*.

A. GORDON LORIMER, architect, Douglaston, L. I. With Bertram Goodhue, Belton, Allen & Collins, John Russell Pope. Chief, Bureau of Architecture, N. Y. C. Department of Public Works.

ERNEST KUMP, architect, San Francisco. Specialist in school architecture. Known for Fresno City Hall.

THEODORE T. MCCROSKY, director, Greater Boston Development Committee. Former executive director, Chicago Plan Commission, Director of planning, New York City. Helped replan Nanking as new capital of China.

THOMAS CREIGHTON, editor, *Progressive Architecture*. With Alfred Hopkins. Architect, Department of Hospitals, N. Y. C.

GEORGE GREY WORNUM, architect, London. Won 1932 competition, R.I.B.A. building. Medal for Highways Depot, Westminster.

WILLIAM ROGER GREELEY, architect, Boston. With Clippton, Sturgis and Kilham, Hopkins & Greeley. Works: Waltham, Mass. City Hall, Hingham Memorial Tower.

SERGE CHERMAYEFF, director, Chicago Institute of Design. Practiced in England and California. Professor, architecture, Brooklyn College.

TALBOT F. HAMLIN, professor, architecture, Columbia. Historian, best known for *Architecture Through the Ages*. Architect, Ginling College, Nanking.

SIEGFRIED GIEDION, art and architectural historian, Zurich. General secretary, C.I.A.M. Author: *Space, Time and Architecture*.

A. M. FRIEND, JR., professor, art, Princeton.

LOUIS JUSTEMENT, architect, Washington, D. C. Chairman, A.I.A., urban planning committee.

WILLIAM WILSON WURSTER, dean, architecture, M.I.T. With Delano & Aldrich, also practiced law. Architectural practice, San Francisco. Best known for Valencia Gardens Housing Project, San Francisco; Schuckl Office Building, Sunnyvale.

GEORGE FRED KECK, architect, Chicago. Solar house pioneer. Taught at University of Illinois and Chicago Institute of Design.

ROY JONES, professor, architecture, University of Minnesota, and general manager, Architects Small House Service Bureau. Regional supervisor, HOLC in 1934, practicing architect, Minneapolis.

KENNETH S. KASSLER, architect, Princeton. Site planning, Resettlement Administration. Taught, Princeton.

J. KENDALL WALLIS, M. D., Princeton.

AYMAR EMBURY, architect, New York City. Architect, Port of N. Y. Authority, Park Department and Triborough Bridge Authority.

HENRY A. JANDL, assistant professor, architecture, Princeton.,

FREDERICK J. ADAMS, consultant to many state and municipal planning boards, city planning professor, M.I.T.

CARLOS CONTRERAS, architect, Mexico City. Taught at Columbia. Guggenheim Foundation representative.

MORRIS KETCHUM, architect, N. Y. C. Specialist in store design (Lederer de Paris, Ciro's, Florsheim). With York & Sawyer, Francis Keally, Mayers, Murray & Phillips, Edward Stone.

PHILIP JOHNSON, architect, New York; consultant, architecture, Museum of Modern Art.

WELLS IRA BENNETT, dean, architecture, University of Michigan, where he joined the faculty in 1912.

JOHN KNOX SHEAR, assistant professor, architecture, Princeton.

WILLIAM F. SHELLMAN, assistant professor, architecture, Princeton.

WALTER T. ROLFE, architect, Houston. Taught at University of Texas for 20 years and designed or consulted on more than 300 buildings.

distributed honorary degrees: Alvar Aalto and Robert Moses got them, Frank Lloyd Wright did not arrive in time for the award.) Most regarded the occasion with an appropriate solemnity. Even the unimpressionable Mr. Wright told the group that he had prepared a manuscript for the first time in many years, and he read it without interpolations.

If, as Arthur Morgan said, city architects are "building monuments in a graveyard," the architects themselves brought evidence that their monuments are at least solving some technical problems and providing some rich possibilities for building in other locations whenever society makes them available. The discussion, often brilliant and occasionally adventurous, was not generally shadowed by Morgan's sense of urban doom, with nothing ahead but the atomic explosion. Only Frank Lloyd Wright, with his imperative need to touch the fundamentals in any problem, reminded the last session that our "push-button civilization had finally pushed the button that released terror."

Nor did the planners waste their energy shadow-boxing the social and economic imperatives that sit among the gravestones. This was partly because Princeton itself had set a reasonable focus and partly because most felt, as Henry Churchill sensibly put it, that "What we should try to do is to clarify what kind of a city, what sort of environment would we build for ourselves and the few people we know, and the millions we don't, if we had our way and could find understanding of their way."

Land Legislation. Most direct statement on the economic questions tangent to planning came from George Howe who said flatly that "it is impossible to have planning so long as the National Association of Real Estate Boards controls the real estate of America" and told the conference that it should "place itself well behind the initiation of discussion of an American Land Act whereby the power will be taken away from the real estate boards." This suggestion the conference did not take.

By contrast British architect George Wornum told of Britain's progress in land planning, industrial decentralization and prefabrication. But a new and unexpected factor seems likely to check, at least temporarily, the British advance. Wornum said that the Labor Government, losing money on the railroads, has just passed a bill banning trucking beyond a 60 mile distance. He believed this would heavily affect the prefabricated housing industry and seriously limit industrial planning.

Design's Dilemma. Discussion seemed most fruitful when the architects stayed closest to their own technical problems. The relation between standardization and individuality, for instance, got a clarifying going-over. Both Gropius and Aalto expressed confidence that it is possible to "humanize the machine," and Aalto told how even the most primitive prefabrication of frame houses in Finland (done by the encamped Army about 15 miles behind the lines) had been able to produce a rich variety and flexibility in detail. Gropius pointed to the possibly wrong road the industrialized house seems to be taking: many firms are making whole houses, few parts.

Aesthetic Confusion. It was in the amorphous domain of aesthetics that this group of modernists registered the most concern—and the most confusion. Chermayeff came as close to the heart of the matter as anybody when he hoped for a "wonderful ample emptiness rather than the gadgetry we are creating at this moment." For the most part, the conferees, seeking some touchstone of aesthetic value, floundered helplessly between metaphysics and science (with the latter represented heavily by Dr. Ames' report of experiments at the Dartmouth Eye Institute).

Only eloquent Gyorgy Kepes seemed able to reconcile these opposite poles of human thought. Said he: "Contemporary man regards himself as an object within objects, as a separate entity isolated from everybody else . . . Scientists, on the other hand, have been compelled to substitute dynamic relationships, energies, processes and organization of fields for static concepts of isolated entities . . . We must extend the new scientific understanding . . . We must stop thinking in terms of units; we must learn to think in terms of unities, that is, in terms of the organic relationship of units . . . We can no longer indulge in the mere designing of individual objects, we must span the whole field to give contours to the objects."

CITIES

THREE WAYS TO BUILD HOUSES

Federal, municipal, private enterprise methods show big differences.

Under the tight lid of housing shortage, steam bubbled up in some strange new shapes. A lot of public and private energy seemed to be pushing the job of houses-in-a-hurry, but some of it was of a kind to make a conscientious Building man shake his head wonderingly.

In East St. Louis, Mo. the federal government had moved in five corrugated iron buildings to house Negro war veterans (see cut). Local building enterprise was open-mouthed at the discovery that these ex-Army barracks, now being re-equipped and erected on the new site, would cost as much as $11,730 per building or $5,685 per family unit. Boston was launching a vast rental housebuilding program which, backed by $100 million of city money, would be directly competitive with private enterprise building for medium-income groups. On the other hand, in the apple-growing valley around Yakima, Wash., builders, real estate dealers and building labor teamed together to build $5,000 permanent houses for veterans by paring costs and profits.

Two-Year Argument. Why Massachusetts is the only state to authorize cities to spend money for permanent, non-low rent housing is a question that can only be answered by Boston's two-year long argument over just what should be done for the homeless veteran.

At the war's end Boston was one of the few cities able to look forward to an immediate start on a federal low-rent housing project, for which plans had been made before the war. This was the much-publicized "circus-tent-shaped" design, first public housing project designed to fit families of all sizes. Plans called for a central 13-story tower of 3-room apartments and tapered off to 8-room single-family houses at the edge of the site. This drew opposition from Mayor James Curley, a well-known proponent of the many advantages of municipal enterprise not subject to



FEDERAL GOVERNMENT paid $11,730 to re-erect this onetime Army barracks as temporary housing for two veterans' families.

federal audit. The project's central tower, the Mayor protested, would dominate the spire of the nearby Cathedral.

No Shacks for Veterans. While controversy over the federal low-rent project dragged on, veterans' organizations protested the lack of housing action and demanded that temporary emergency housing be provided. This stop-gap remedy was also distasteful to Mayor Curley, who said flatly that no city lands would be turned over for temporary "shacks for veterans who deserve something better."

By last June—14 months after planning interrupted by the war had been resumed—revised plans for the 420-unit "circus-tent" project were finally ready. But the Federal Public Housing Authority found that plans, which included some 8-room units, would not meet the statutory limitation of $5,000 per family unit (although they did meet the $1,500 room cost limit). Convinced that large units were necessary to take care of its many large families, Boston asked for exemption from this requirement. This question was finally referred to the U. S. Attorney General, and Boston is still awaiting his decision.

No Rent Limits. Last month the city of Boston asked for bids from local contractors on the first 20 houses, for which plans have been prepared by John M. Gray and Robert W. Blaisdell, Boston. The city expects to

experiment with a variety of building methods and materials in its program, which will include single-family houses, duplexes and some 10-unit apartment blocks. Only promise so far made about rents for these city-financed houses is that they "will be within OPA ceilings." The Boston Housing Authority says that climbing costs have already meant that original estimates of $7,000-$7,500 for a single-family house and $12,500 for a two-family house have had to be revised upward. Many Bostonians waited with pointed interest to see who will get the building contracts.

SCARE SALES

Sharp operators try to clean up on city plans for redevelopment.

In Baltimore urban redevelopment is still a matter of hope and talk, lacking as yet any foundation in dollars or municipal enabling legislation. But to a few sharp operators the big talk promised big profits.

While rumors flew and the exact boundaries of the areas named for redevelopment shifted daily in local surmise, nervous property owners wondered just what to expect. Some feared they would be forced out of their property, get less than a fair price. Among these, what the city council called "unscrupulous real estate sharks" discerned a profitable opportunity. The sharks told owners they would face great losses unless they sold before the city moved in. After this kind of softening up, it was not hard to pick up properties at bargain-basement prices.

Last month Baltimore's city council did what it could to reassure property owners, forestall scare sales. The council reminded that any property owner not satisfied with the price offered by the city could appeal to to the courts. But the wave of scare selling had already alerted many another city to the speculation likely to be set off by big talk—and little action—on urban rebuilding.

LABOR

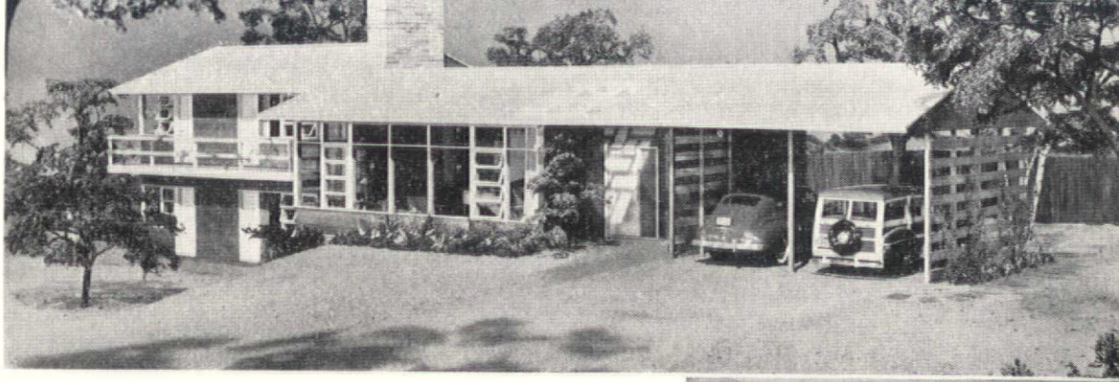
PENSION PLAN

Electrical contractors first in building to pension workers.

The electrical construction industry, first sector of building to set up national arbitration machinery (FORUM, March '47), will next month become the first to operate an industry-wide pension plan to which employers will contribute. Establishment of the National Electrical Benefit Board marks the most recent step in the uninterrupted advance toward labor stability which has been made by the National Electrical Contractors Association and by the 55-year-old International Brotherhood of Electrical Workers (AFL).

Under the pension agreement, all contractors who employ members of the International Brotherhood will pay a one per

(Continued on page 16)

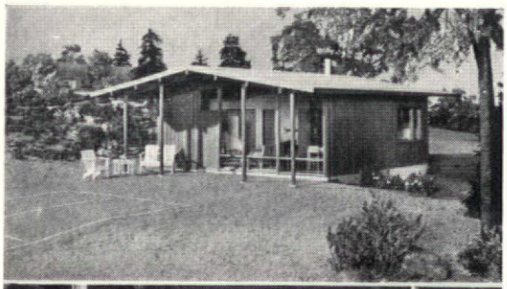






Photos by Eric Schnall

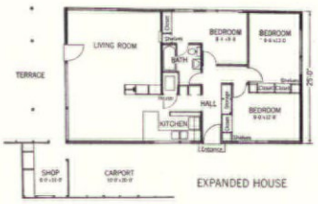
LIFE HOUSES: Moderate modern in three price brackets.

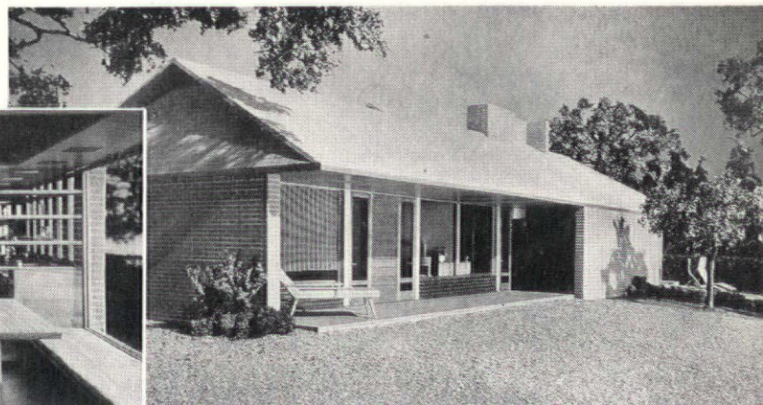


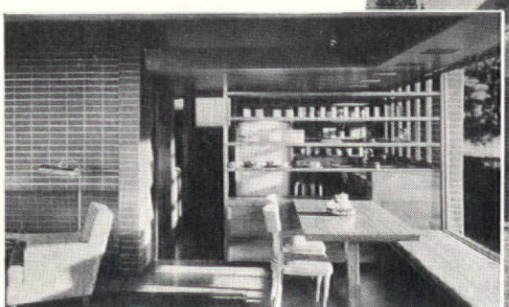


As eloquent argument for good house design, *Life* magazine offered its readers this month three model houses by outstanding modern architects. Ranging from a basic 25 x 25 ft. minimum house to a lavish country house costing $25,000 without land, the designs were inconspicuously, but clearly contra-Cape Cod. The largest of the houses, by architect Edward D. Stone (top), achieved maximum comfort for an upper middle income family with three children, but made as economical use of space as the smallest (about $8,000) by Pietro Belluschi (left). Robert Schweikher designed the suburban house (below) for an average U. S. family able to pay $18,000. In all three cases, the necessity to eliminate frills became the architects' best ally: e.g. the economic interior brick walls of the Schweikher house were richer looking and more soundproof than ordinary walls.









cent payroll assessment. This employer assessment for pension purposes is unprecedented in the building industry, where most workers are only intermittent employes of any one contractor. Employers' contributions will be matched dollar-for-dollar by levies from the Brotherhood membership, according to a pension plan which has been operating for many years. From the jointly contributed fund, IBEW members will get $50 a month retirement benefits when they reach the age of 65 after 20 years of continuous union membership. Some 150,000 workers and 2,000 contractors are covered by the agreement.

The joint pension fund has been discussed for the last two years by the Association and the Brotherhood. Last month the Commissioner of Internal Revenue gave it the decisive federal blessing: payroll assessments may be deducted for income tax purposes as an item of business cost.

DESIGN

HOSPITAL BOOM

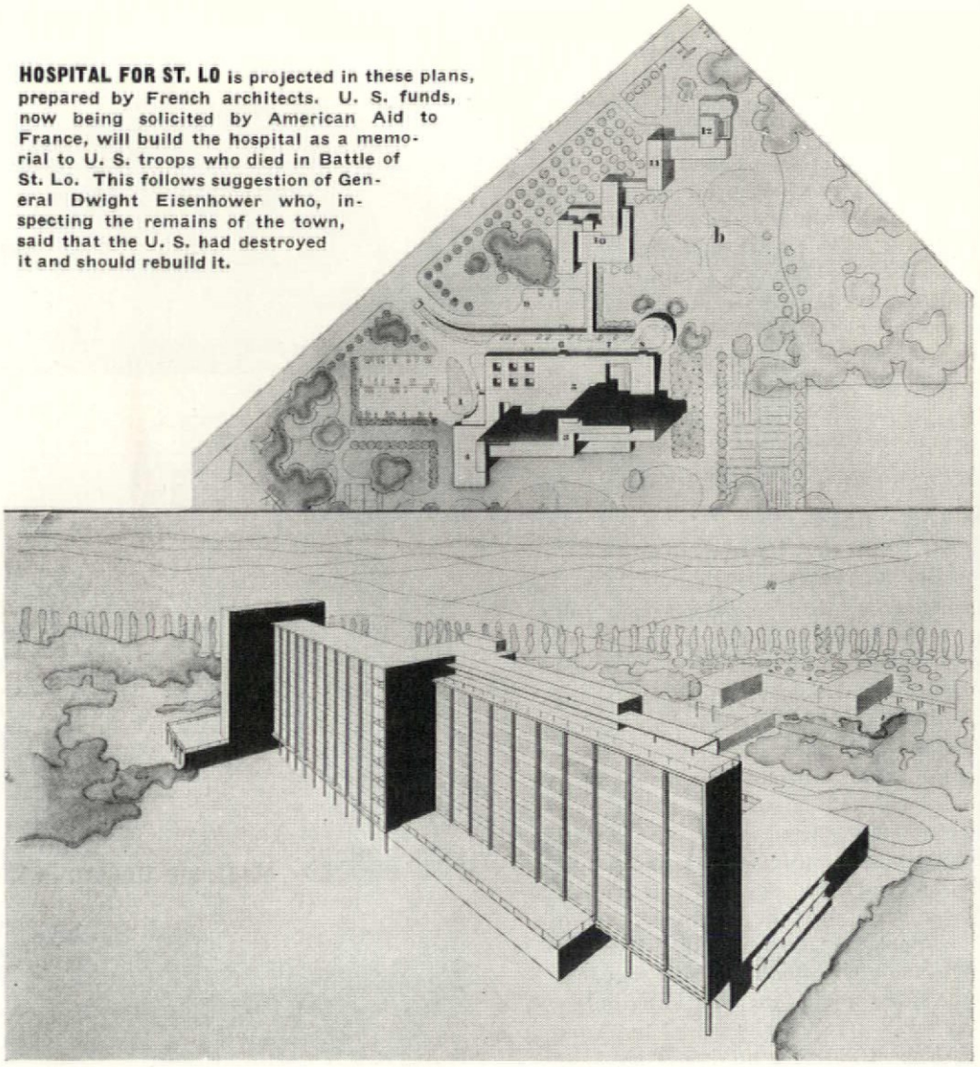
Plenty of room for architectural ingenuity, Washington says.

Over the next five years, the U. S. can look forward to more than $1.7 billion worth of hospital building. This will go far to provide 4.5 beds for every 1,000 population, which is what hospital experts say we need. We now have only 3.4 beds per 1,000.

With state surveys of hospital need now almost finished (FORUM, Nov., '46), the giant building program, sparked by federal dollars, is expected to get underway next July. The program calls for up to $75 million in federal funds every year for five years, to be matched two-to-one by state and local building dollars. This federal boost for hospital construction is in addition to the $772 million already appropriated for veterans' hospitals. Only possible hitch is that Congress might delay appropriations for a year — if it gets frightened by high building costs.

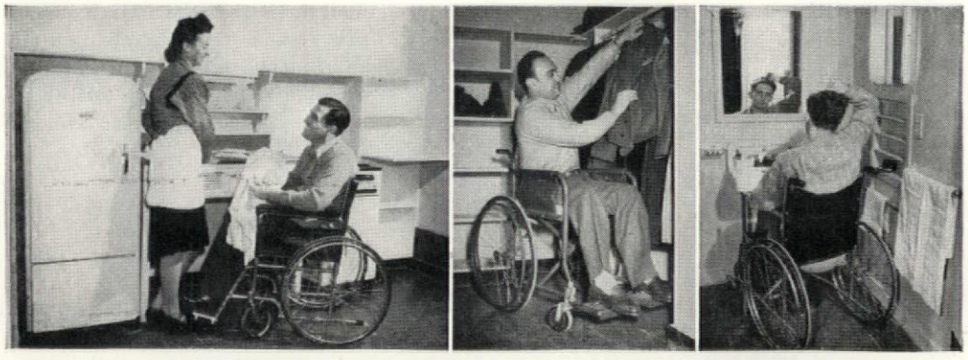
Last month the U. S. Public Health Service issued regulations and standards (Federal Register Document 47-1247) which made it plain that architects will have more room for design ingenuity than they have ever had in a federally-backed building program. Up to architect Marshall Shaffer is final approval of plans, which must be submitted with applications for federal building dollars. Shaffer is chief of the Office of Technical Services, Division of Hospital Facilities of the U. S. Public Health Service. He has gone on record against the heavy hand with which architects experienced in federal building are all too familiar and has made it clear that architects working on hospitals will have all the latitude consistent with meeting basic standards.

The American Institute of Architects, invited for the first time within the memory of most members to consult on how the private architect can fit into a billion dollar federal building job, greeted the program with a characteristic mixture of enthusiasm and alarm. A.I.A. was gratified by the "first integrated planning for hospitals on the state and community level in this country's history," but warned that architects must (1) take responsibility for setting up the right kind of state machinery (where no State Architect exists) for passing on drawings and specifications, and (2) participate in the State Hospital Advisory Council required by the Act. Said A.I.A. solemnly: "If the results are not outstanding we may find our profession set back a generation, and the government bureaus convinced that to get a job done well they must design it themselves."

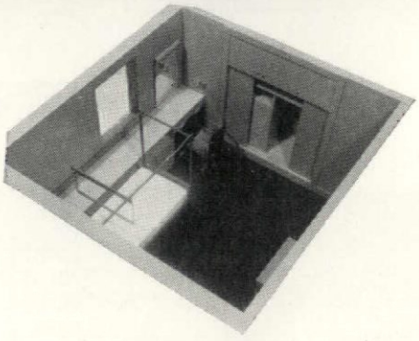


HOSPITAL FOR ST. LO is projected in these plans, prepared by French architects. U. S. funds, now being solicited by American Aid to France, will build the hospital as a memorial to U. S. troops who died in Battle of St. Lo. This follows suggestion of General Dwight Eisenhower who, inspecting the remains of the town, said that the U. S. had destroyed it and should rebuild it.

Herald-Tribune

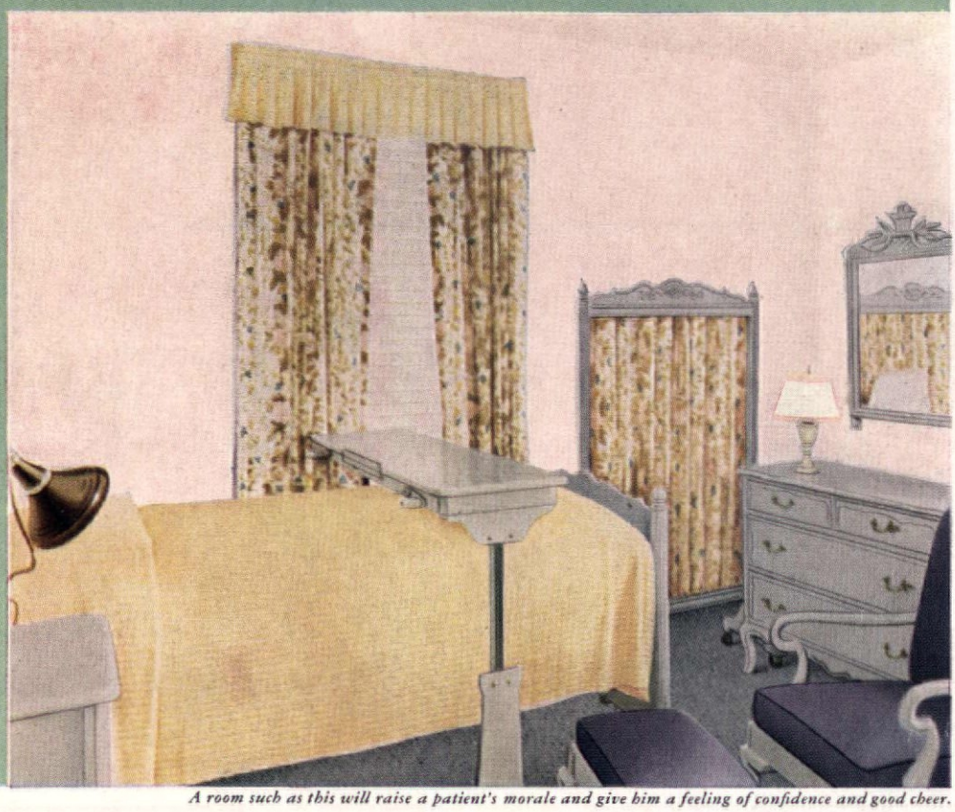


SPECIALLY DESIGNED APARTMENTS for paralyzed veterans have been installed at two emergency housing projects in Brooklyn built by the New York State Division of Housing (above). Architects Lorimer Rich, Robbins Conn and J. M. Berlinger planned the units so that the veteran in a wheel chair can handle most living operations without assistance. To meet the same need, the New York Chapter of the A. I. A. has developed standard units: bathroom, bedroom (right), exercise and workroom, garage. Blueprints are available upon request to the chapter, 115 E 40th Street.



Color Dynamics

Pittsburgh's new system of painting, based upon the principles of the energy in color helps patients to get better faster...is an invaluable aid to medical and nursing staffs.



A room such as this will raise a patient's morale and give him a feeling of confidence and good cheer.

It's easy to apply the principles of the energy in color . . . with scientific accuracy!

IT IS not surprising that Pittsburgh's system of COLOR DYNAMICS should arouse widespread interest among hospital authorities.

For years, medical men have recognized the growing importance of color therapy.

Many of them have cooperated sincerely and intelligently with Pittsburgh's technicians and color experts to establish the extent of the influence of color upon the bodies, minds and nerves of human beings.

Out of such cooperation from hospital executives, maintenance superintendents, nurses—as well as with surgeons and medical specialists—have been evolved many of the practical details of this new system of decoration which utilizes the *energy in color.*

Many hospitals have already made use of COLOR DYNAMICS. By such purposeful use of color, patients' rooms and wards have been painted in colors to speed convalescence, operating rooms to make surgery easier, labor rooms to relieve the feeling of claustrophobia from which occupants often suffer, nurses' stations to promote alertness and efficiency, lobbies, corridors and solaria and dining rooms to be friendly and inviting at all times.

No hospital need seem cold or bleak when it can be transformed so simply and easily by COLOR DYNAMICS into a warm, friendly and more efficient institution.

For a comprehensive explanation of Pittsburgh's new service to hospitals, write today for your FREE copy of a new and enlarged edition of "COLOR DYNAMICS." Pittsburgh Plate Glass Company, Paint Division AF-4, Pittsburgh 22, Pa.



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Paint BEST with PITTSBURGH PAINTS!

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FLORHIDE—for floor surfaces. Quick drying, tough finish which can be scrubbed frequently with soap solutions.

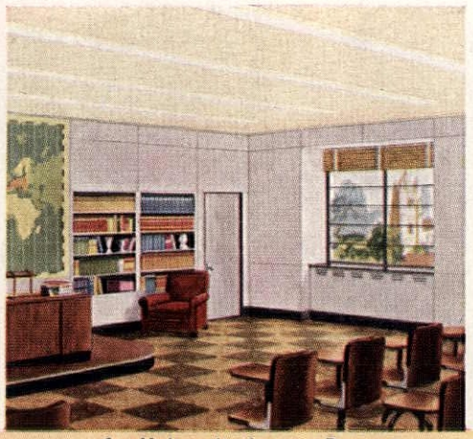
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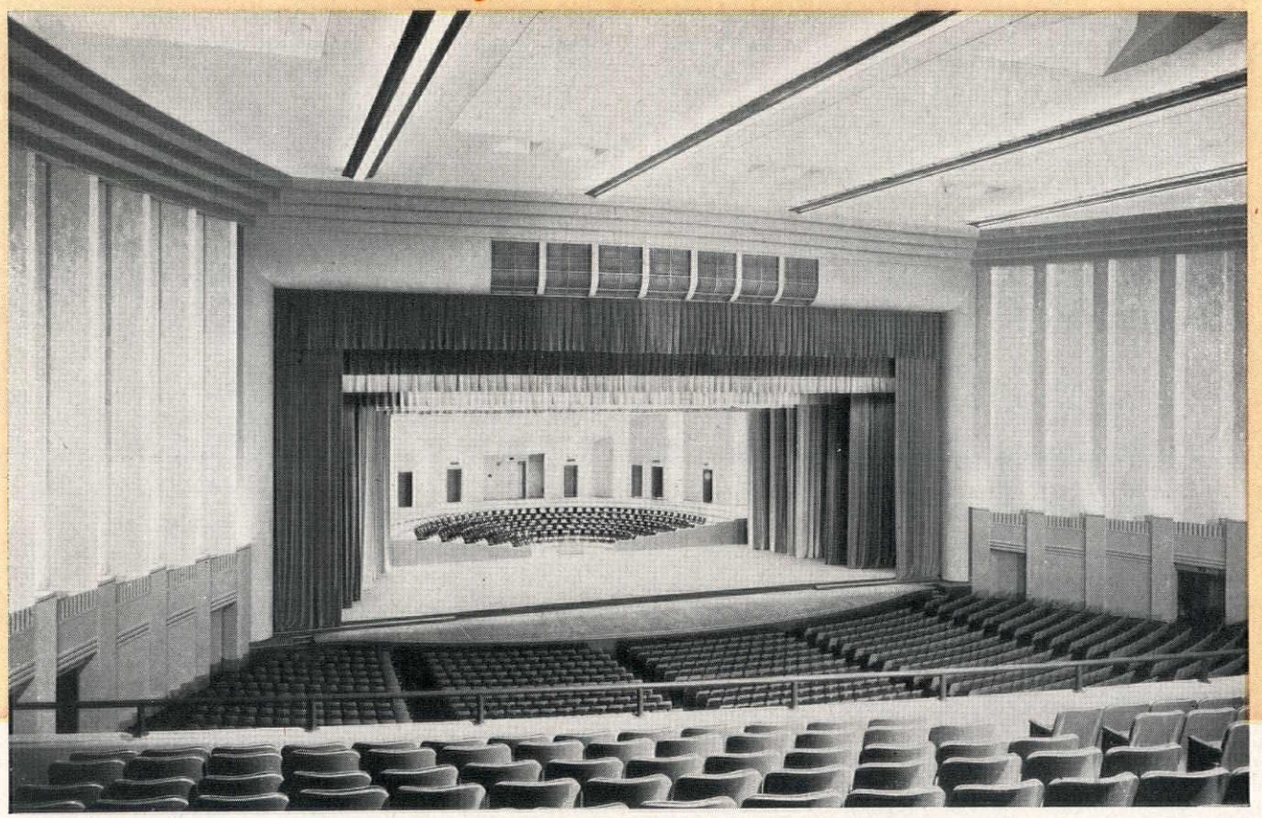


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Whatever your noise problem



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Using these J-M products together in a system of Unit Construction, you can provide your interiors with such important advantages as *structural flexibility* to meet changing needs . . . greater architectural beauty . . . increased comfort.

J-M Unit Construction combines demountable Acoustical Ceilings, movable Transite Walls, and resilient Asphalt Tile Floors —in other words, the *complete interior*, under *one* specification, *one* manufacturer's responsibility.

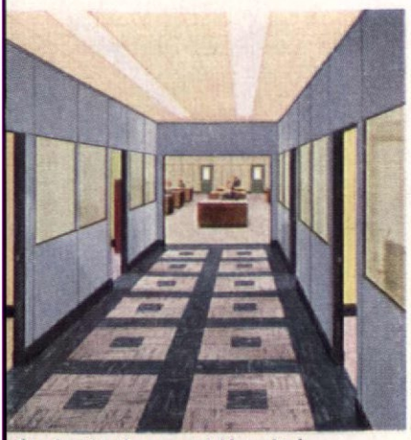
Write for colorful brochure, "J-M Unit Construction."



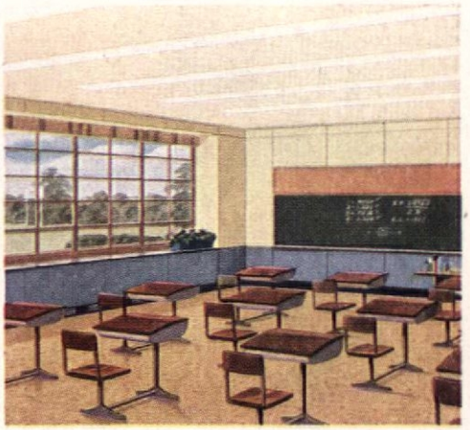
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and colors.

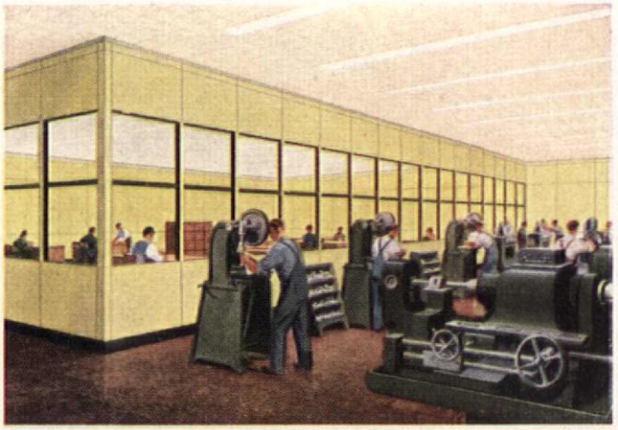




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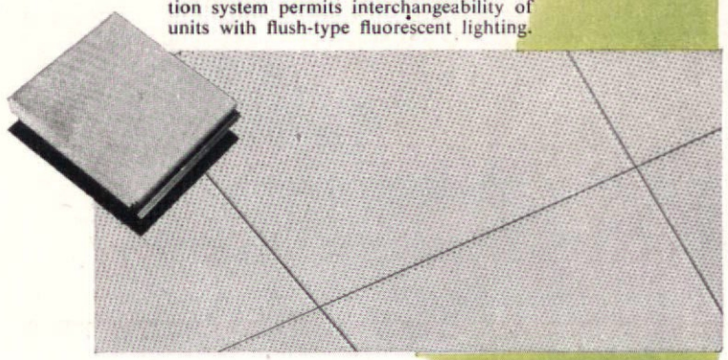
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To assure you the *maximum* in noise-quieting and sound con- ol, Johns-Manville not only provides the correct acoustical aterial for each specific condition, but follows through by *stalling* the material properly.

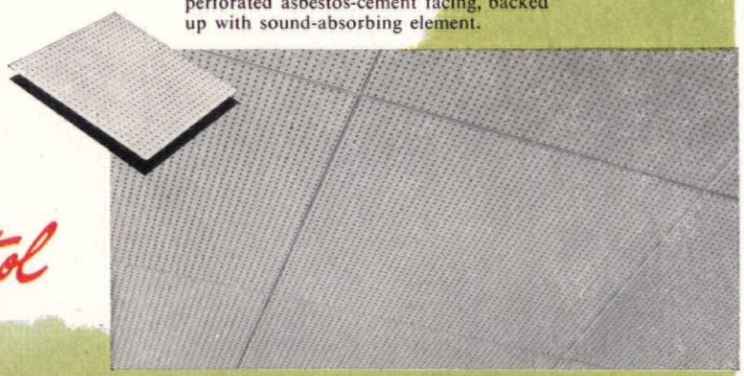
J-M construction crews are trained in the correct methods of pplication, assuring you the greatest possible benefit.

That's what we mean by *undivided responsibility* for the com- lete job. It's one of many reasons you can *rely* on Johns-Manville or effective sound control. For the complete story that tells how o "put a ceiling on noise," write for brochure, "Sound Control." ohns-Manville, Box 290, New York 16, N. Y.

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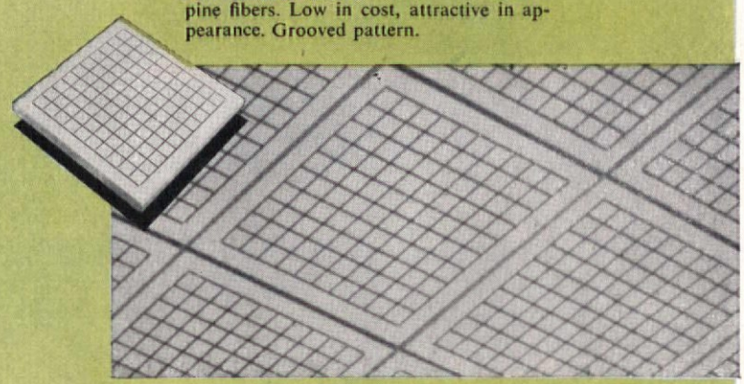
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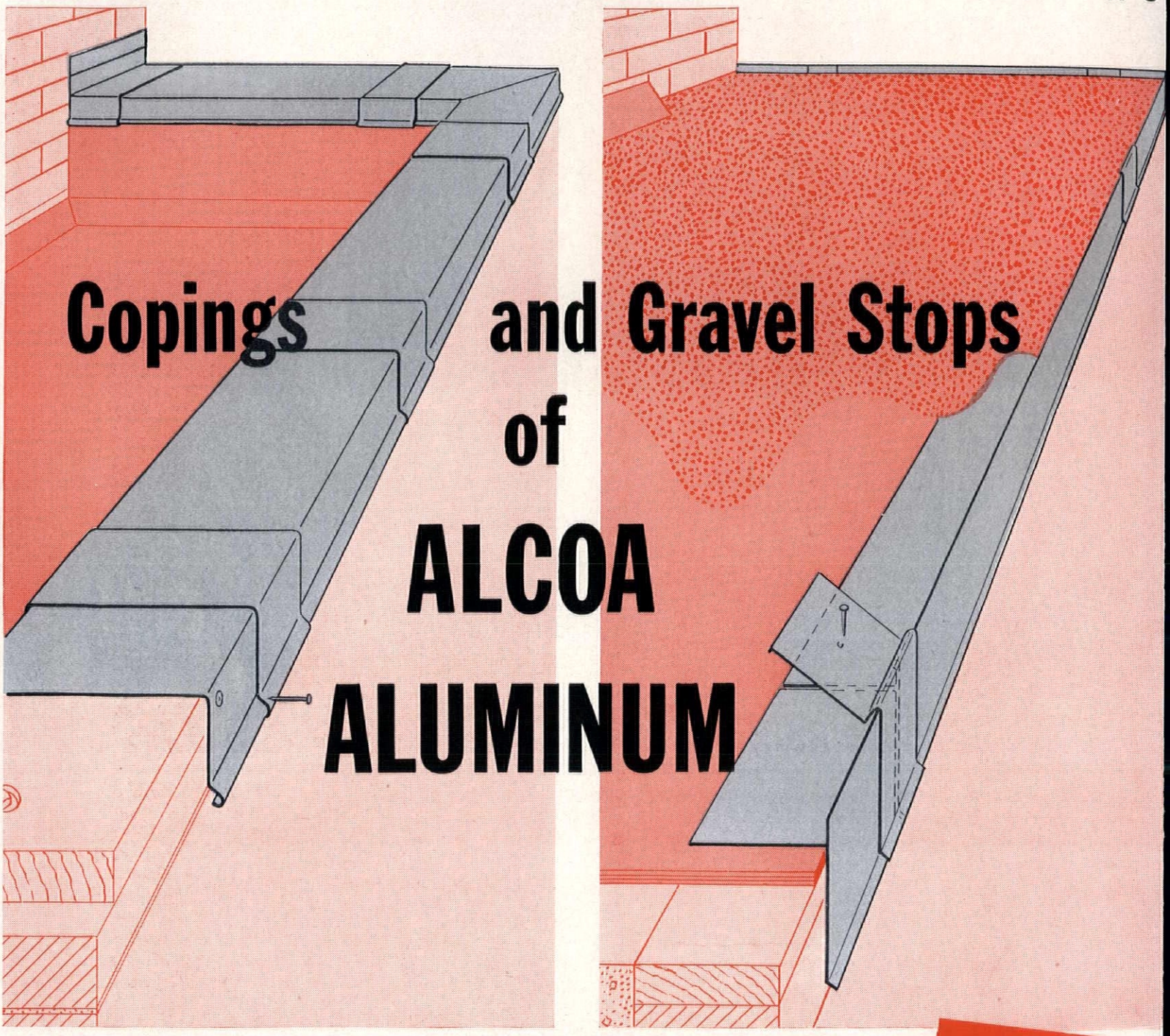
J-M FIBRETEX UNITS—made from selected pine fibers. Low in cost, attractive in appearance. Grooved pattern.



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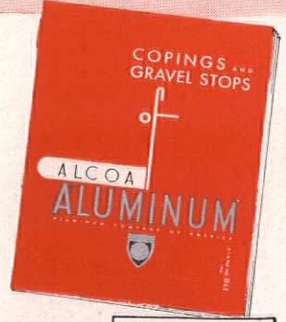
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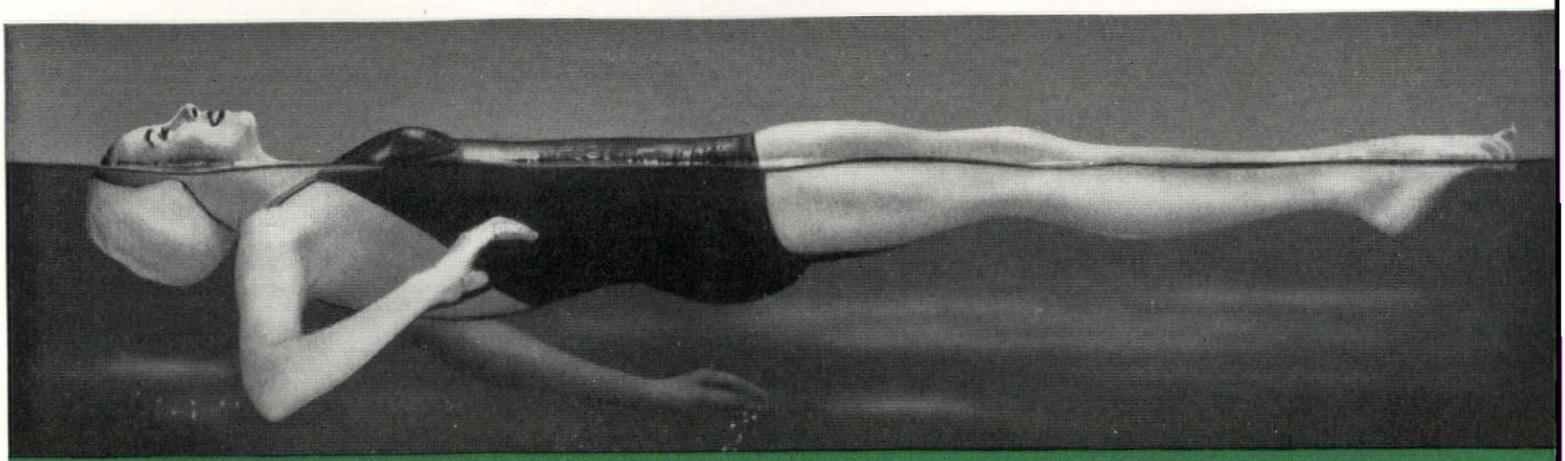
No matter what the job—small home or largest commercial establishment—there's a Spencer for every type building . . . for every firing method. Write or wire today for a catalog . . . also for the name of the Spencer Heating consultant nearest you.

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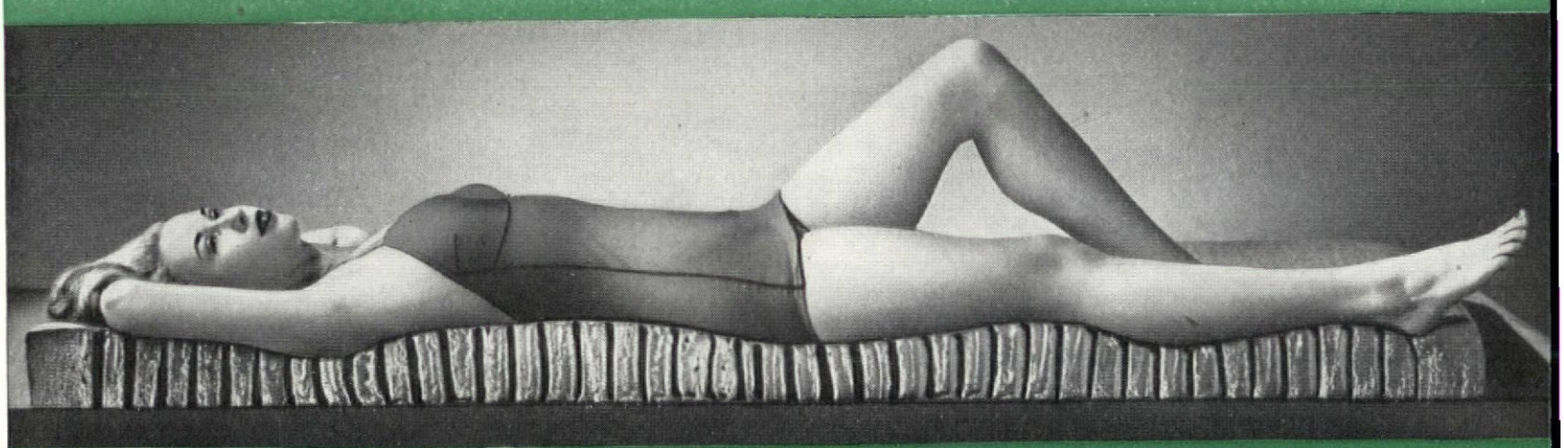
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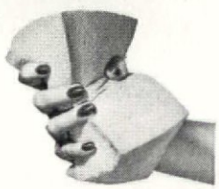
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YOU "FLOAT" ON U. S. KOYLON FOAM



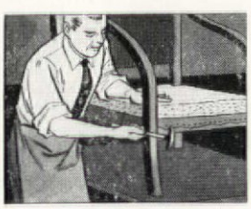
SEE how U. S. Koylon Foam forms to body contours . . . providing gentle but firm upward support in direct proportion to downward pressure. This fluid buoyancy means matchless comfort—the kind of comfort that rests and refreshes.

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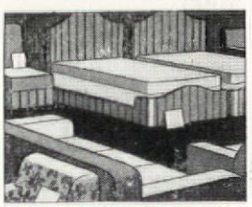
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These are "over-all" advantages architects can point out to *any* industrial company. For certain companies—such as Food Processors, Packing Houses, Dairies, etc.—Facing Tile offers *other* specific advantages. It is resistant to grease, odors, bacteria, lactic acid, steam and stains.

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Please feel free to call on any Institute Member for more information about Facing Tile, or write direct to Desk AF-4 of the Institute. See Sweet's 1947 Architectural Catalog for additional data.

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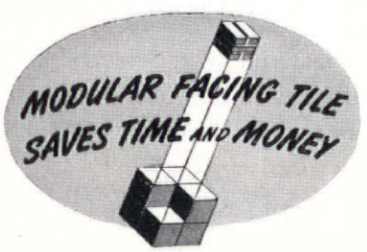
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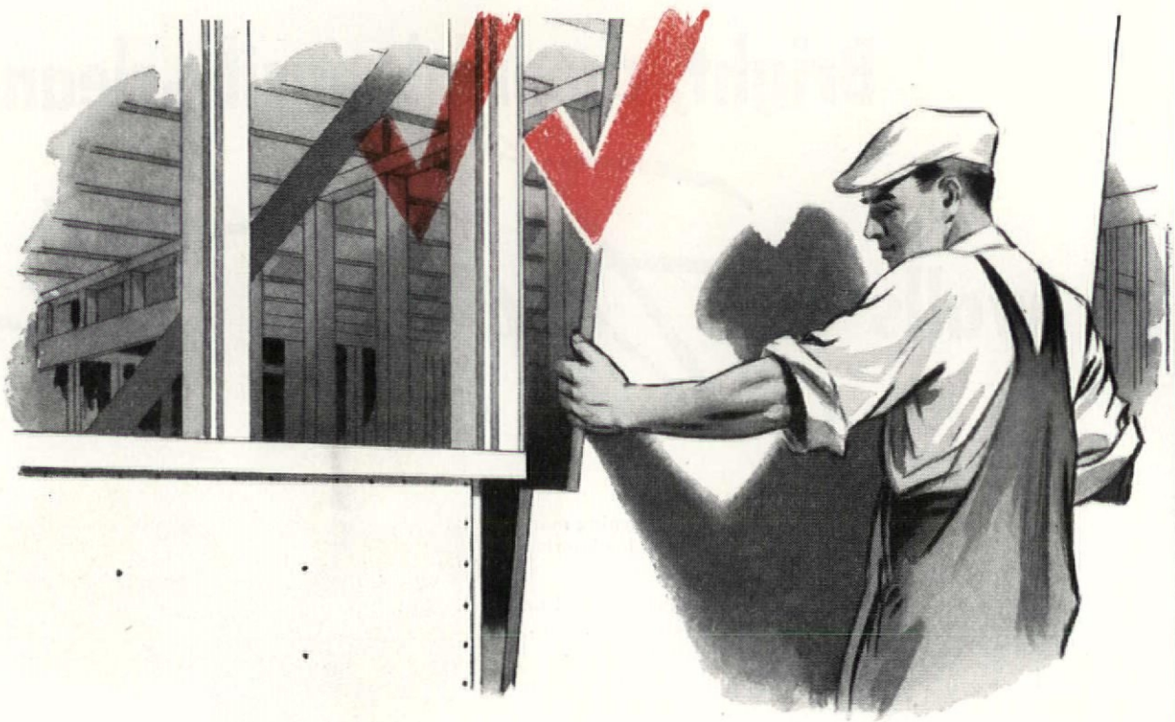
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GIVE YOUR CLIENTS **Double-**

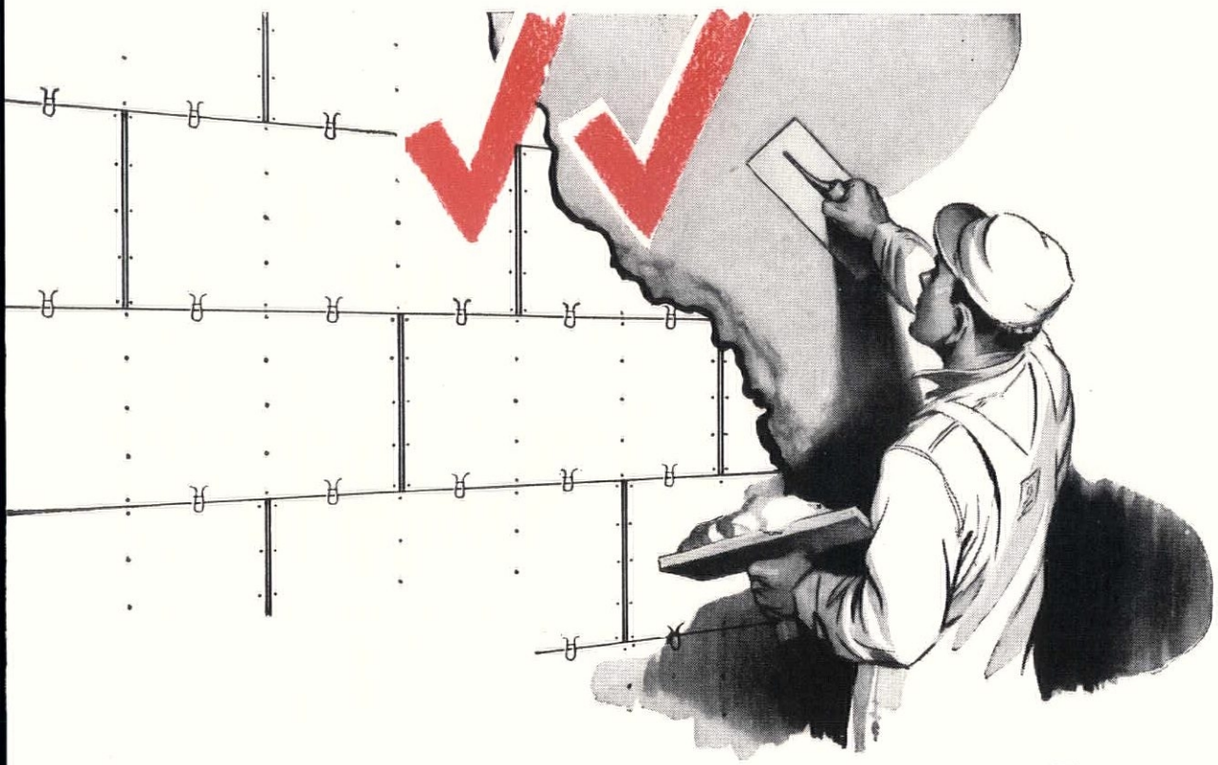
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All this, PLUS insulation, so you can tell a client "Here's where your money buys double usage."

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One material—double usage! No spreading of joints—no "snap-back" of lath when troweling. Surface stays firm and level. Insulite Lok-Joint Lath, with vapor barrier, guards against condensation problems.

Refer to Sweet's File, Architectural Section 10 a/9

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LETTERS

Design's Bad Boy . . . Views of the News . . . Czechoslavakia looks at Frank Lloyd Wright . . . Pampas Politics . . . Lescaze on the U.N. site . . . Fires and fireproofing . . . What price modern? . . . Labor's short supply.

KIESLER CLAQUE

Forum:

Congratulations on your profile of Frederick J. Kiesler. In these lush times when it is tempting to measure architectural significance in terms of huge projects and huge profits, the FORUM deserves credit for a fine description of a man of genius and uncompromising integrity. Your article has succeeded in putting across much of the wit, imagination and sensibility of a delightful human being. It will be appreciated wherever architecture is valued more than money-making.

HUSON JACKSON, Architect

New York, N. Y.

Forum:

. . . The Kiesler story is very good and I'm glad that you are focusing attention on him. For years I have been subconsciously wondering why I didn't hear or see more of his fine work. He must be quite a guy.

HARRIS ARMSTRONG, Architect

Kirkwood, Mo.

NEWS BREAK

Forum:

Having long been an admirer of the FORUM, I regret to point out an error that appeared in the February issue. On page 12, under the photographs of Messrs. Wright, Milles and Saarinen, it is stated that the last named has been elected to honorary membership by the American Institute of Architects.

The Board of Directors of The A. I. A. voted to award the Institute's Gold Medal to Mr. Saarinen. The presentation will be made at the convention to be held in Grand Rapids this spring. The Institute's Gold Medal is the highest honor that it has the power to bestow.

The announcement of the award was clearly stated in a news release issued from this office on January 12. We are, therefore, at a loss to understand the reason for the error.

On another matter, I would like to observe that your news articles, particularly those with respect to Washington, are inevitably obsolete by the time they are published, due probably to the fact that they are prepared well in advance of the date of publication. Circumstances have on occasion followed a different line from those indicated in the articles.

The only satisfactory solution of the problem is, to my mind, a daily news sheet. This would probably be impractical, if not impossible; also, there is an adequate supply of such news sheets already on the market. Architects could, of course, inform themselves by reading the daily papers. This, I recognize, is a study which few of the public care to undertake.

EDMUND R. PURVES
Director of Public and Professional Relations A.I.A.

Washington, D. C.

1) Apologies to Mr. Saarinen who incontestably merits the gold medal FORUM neglected to give him.
2) News coverage on a monthly basis is precarious at best. Despite the lack of a crystal ball, FORUM has maintained a high average of hits, few errors.

FORUM FOUNTAIN

Forum:

As an architect in a country which has not been able to build for the past eight years, I find your magazine a fountain of new ideas. We also have good ideas, but we have not your possibilities, nor people who will give a chance to any architect.

However, I take exception to Frank Lloyd Wright's spiral exhibition tower (FORUM, Jan. '46). Must a tired visitor studying pictures go up ramps and down ramps? Surely, in the same area, stairs and lifts could give the same effect without constant climbing . . . And the house for Mr. Loeb by the same architect (FORUM, June '46). If one is a millionaire, why must he live and sleep in a room with bullseyes in the ceiling? Must he?

NORBERT TROLLER, Architect

Brno, Czechoslavakia

1) No. Elevators carry tired visitors to any level.
2) No, not even in America.—ED.

ART AND DICTATORSHIP

Forum:

It seems odd to me that a magazine which goes to all the trouble and expense of producing an excellent article like that on contemporary Argentine architecture (FORUM, Feb. '47) can so coolly avoid any mention of the most salient fact of Argentine life today—one which troubles American and Argentine democrats alike—namely, the pro-fascist dictatorship of Juan Peron. You mention the "close cultural ties" of Argentina with France and Italy. Has the FORUM never heard of Peron's economic ties with Hitler's Germany, or his political links with Franco's Spain?

. . . It makes one wonder why architects alone of all groups of professions always assume that *their* work will not be affected by reactionary regimes. I think the architects of Europe have learned that neither their persons nor their work are immune from fascism.

For that matter, after a couple of years, experience with Peron, the Argentine architects themselves should be able to give us some pointers on the connection between politics and architecture. Isn't it true that faculty members in many Argentine schools and colleges have been asked to resign and Peron stooges appointed in their places?

WILSON KNOWLES

New Orleans, La.

In mentioning the close cultural ties of Argentina with France and Italy, FORUM referred to architectural and artistic influences, left detailed political analysis to political publications.—ED.

SITE FIGHT

Forum:

Apropos Dean William Wurster's letter (FORUM, Feb. '47), I like New Jersey, too, but his paean of praise for the Palisades as a U.N. site comes as a surprise.

Columbia University Press has published the Report of the Headquarters Commission, and it contains an excellent analysis by LeCorbusier of some of the sites. Here is what he has to say about the Palisades:

"Contrary to the urbanist's hope, the Palisades are not the vast plateau he dreamed, but a mere rocky crest. The land is a slope, inclined to the opposite side . . . There is no plateau on which to set a city, only a slope in the wrong direction, leading the eye to a site without attraction and with little promise. The Palisades seen from Manhattan hold a promise . . . which they fail to keep!" How true.

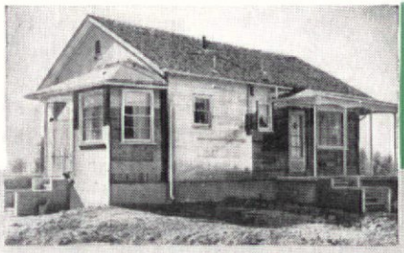
It would seem that in the discussions about sites, we thought more of what we wanted than of what others wanted. We failed to realize that most people coming from outside the U. S. did not wish to surround themselves with the open spaces which are familiar at home, but rather wanted a characteristically urban American setting.

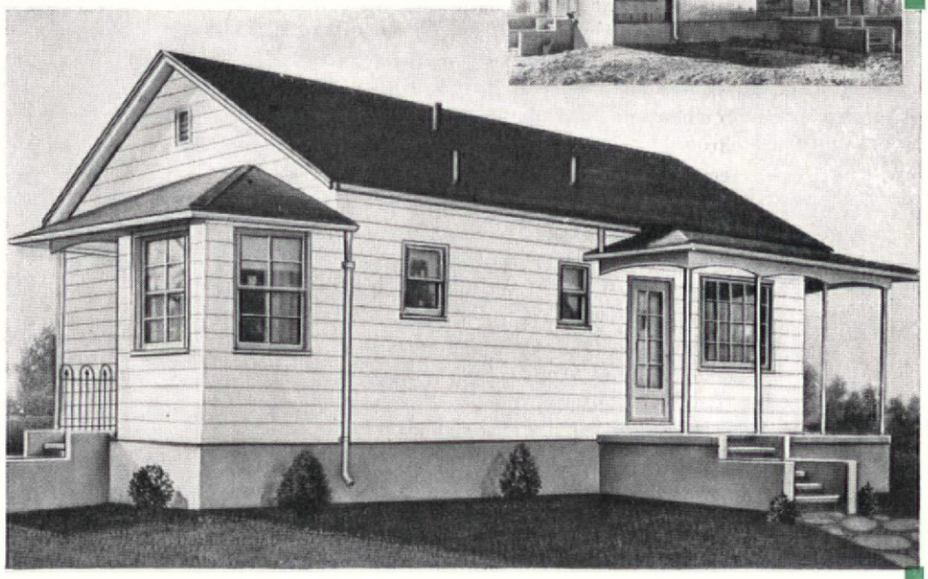
The Manhattan site for the U.N. is, in my opinion a wonderful selection, The river assures a permanent source of light and air on the long side. A large area north to 125th Street is fairly undeveloped and can obviously become a residential area for U. N. personnel.

The U.N. on Manhattan will have to be essentially a vertical city. Nothing wrong with that. It certainly should not surprise

(Continued on page 24)

Note the true lines, literally "straight as a die," and the attractive corner-cap finish in this small home re-siding job. ▼





RE-SIDING JOBS PROVE THE EXTRA VALUES OF REYNOLDS *Lifetime* ALUMINUM CLAPBOARD SIDING

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Reynolds Metals Company, Building Products Division, Louisville 1, Kentucky.

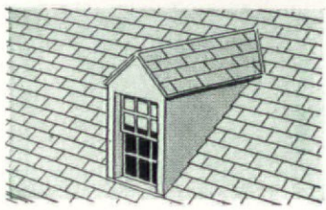


NATIONAL ADVERTISING — full pages in full color appear regularly in Saturday Evening Post, Better Homes and Gardens, American Home, House Beautiful, Small Homes Guide, also two-color pages in Country Gentleman, Progressive Farmer, Successful Farming.

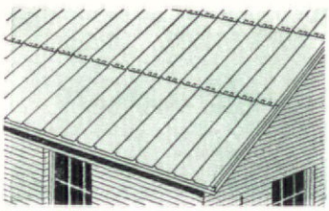
REYNOLDS LIFETIME ALUMINUM



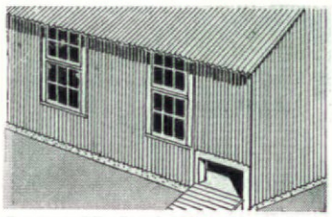
Weatherboard Siding. Sheets crimped like 4-in. clapboard. 8, 10, 12-ft. lengths; 24-in. coverage. Sturdy extra-thick sheet, .024-in.



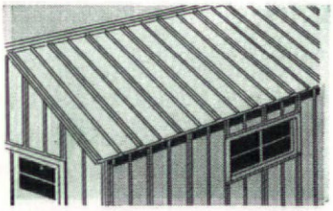
Shingles. Individual shingles that interlock all around, weathertight, covering all nails. Two sizes: covering 8x14½ and 5½x18½.



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5-V Crimp Roofing & Siding. Sturdy extra-thick sheets, .024-in.; 6, 8, 10, 12-ft. lengths; 24-in. coverage.

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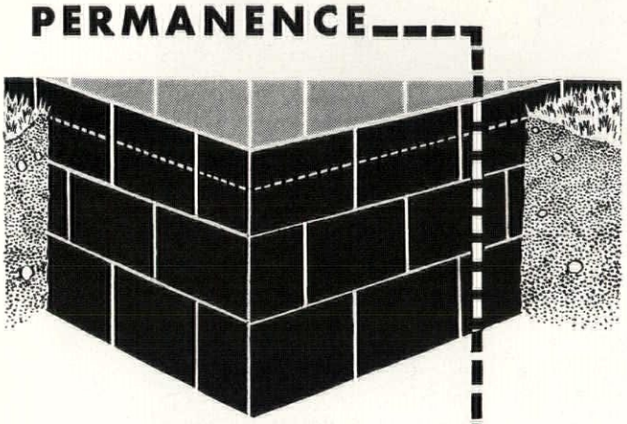
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Americans who were the first to discover how to build skyscrapers and to demonstrate both their efficiency and beauty.

Until the U.N. requirements in space are established—and that is what Wally Harrison is doing at the present time—it is folly to claim that the site is too small. Rough calculations based on approximate population would indicate that probably no more than one-third of the land need be built on.

One of the most challenging aspects of the U.N. project will be the solution of approaches to the site: i.e., roads on one, two or three levels; in other words, the physical connections between it and the city, from the south, north and west.

How far ahead the city can afford to plan and how clearly the U.N. can estimate its needs will depend upon the amount of collaboration between the city and the U.N. planners. At this stage, there is every reason to hope that all concerned are intent on making the outstanding planning and architectural work of our time.

WILLIAM LESCAZE, Architect
New York, N. Y.

Forum:

The enclosed copy of a letter to Mr. Trygve Lie will explain itself:

"The acknowledgment of my offer of land on the summit of Staten Island to the United Nation was duly received; but my intention seems to have been misunderstood.

"It is not intended as a substitute for the Rockefeller plot; but in addition thereto.

"That plot may serve a useful purpose for certain buildings of the United Nations, but for the principal one it is unworthy of the city, being in what has always been considered one of its poorest parts, where surroundings, access and outlook are bad, where there is no suitable room for expansion . . . where it could have no distinction and be simply a skyscraper among other buildings of that kind.

". . . If New York is to be the capital of the world, then the location of its principal building should certainly be the best within its bounds. It would be a grievous mistake otherwise. Why persist in such an error for no other reason than that it was hastily made by delegates who were unaware that a better site was available?

". . . The land I am offering is the highest on the Atlantic coast south of Maine with approaches, surroundings and outlook to satisfy the most exacting and with ample room for expansion if necessary.

"It is almost 400 ft. high, and a 1,000 ft. building rising from it would be the most

(Continued on page 26)

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One of America's Largest Commercial Banks. *Erected 1927:* Trowbridge & Livingston: Architects; Meyer, Strong & Jones, Engineers; Thompson-Starrett, General and Heating Contractors. *Heating Modernization 1940:* Jaros, Baum & Bolles, Engineers: Child & Scott-Donohue, Inc., Heating Contractors.

Buildings are important tools to Chase National, a Webster Heating System user ever since Webster Vacuum System Equipment was installed in Chase's 42 Trinity Place property in 1920.

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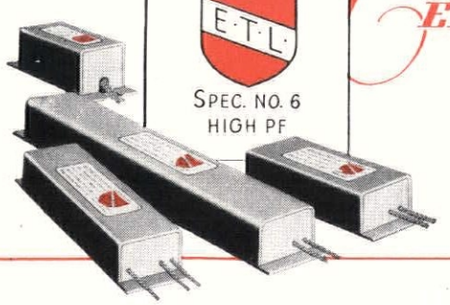
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Fort Wayne, Ind.

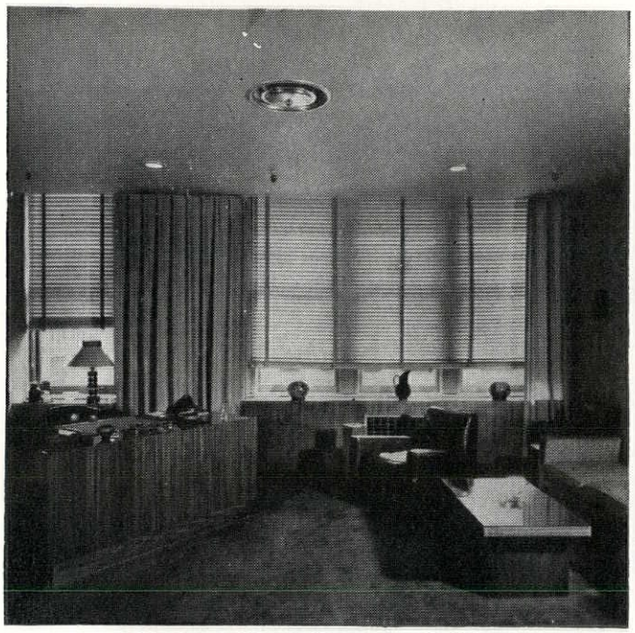
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LETTERS



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Provides complete air conditioning comfort by eliminating drafts, noise, hot or cold spots.

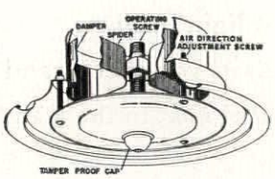
In addition to their unobtrusive appearance, Kno-Draft Adjustable Air Diffusers are specified for installations like the one pictured here in the offices of Schwarzenbach-Huber Co. because they combine all the advantages of scientific air diffusion plus adjustable features which assure positive air pattern control.

Kno-Draft adjustability increases efficiency and economy.

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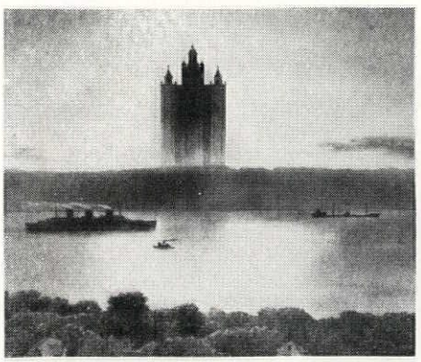
Kno-Draft Direction Adjustment assures positive air pattern control by affording any angle of air discharge from vertical to horizontal that is needed to accommodate ceiling heights, individual or seasonal requirements. Volume adjustment is made with a patented damper that regulates the amount of air without affecting the velocity or diffusion pattern.



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Flagg's United Nations

dominant feature on the coast with superb views over land and water—a site the like of which probably no other great city can offer and one which is in every way ideal for the purpose . . ."

ERNEST FLAGG, Architect
New York, N. Y.

Including rush hour on the Staten Island ferry?—ED.

FIRE FIGHTING

Forum:

The tragic fire in the Winecoff Hotel, Atlanta, Ga. is a matter of concern to all practicing architects. Here was a presumably fireproof structure, and yet the fire quickly enveloped the entire building . . .

I believe that your magazine should feature this problem and go into the type and details of the hotel's construction giving layouts of typical floors with emphasis on stairs, elevator enclosures, and any other factors which would explain the rapid spread of the fire and great loss of life with your suggestions for changes in design to make such buildings fireproof and safe.

MAX HORN, A.I.A.
Far Rockaway, N. Y.

Forum:

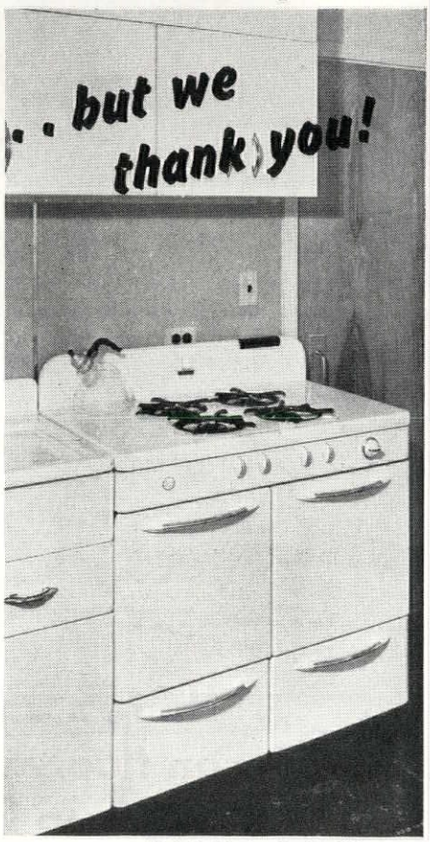
I was very much interested in your story of the disastrous fire in the Winecoff Hotel at Atlanta (FORUM, Jan. '47). Your analysis of the familiar causes and rapid spread of the fire—inflammable wall finishes, open stairways, lack of proper fire protection and fire exits—are tragically correct and unfortunately apply to the majority of hotels everywhere.

In the interest of public safety, I would like to suggest a few comparatively simple alterations by which similar existing hotel structures, built before modern building codes were in force, could be made to comply with minimum safety standards.

The chief problem involved is to make sure that all hotel bedrooms are within

(Continued on page 30)

It's a tough order to fill, Smith & Hill,



Hedrich-Blessing Studio, Chicago

Universal Gas Ranges were chosen for the 1,200 gas kitchens in the Smith-Hill development at Oak Meadow, Ill., to be delivered within the next 18 months.

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Dulciana	8′
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Flute	4′
Violina	4′
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Fifteenth	2′
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	PITCH
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Stopped Flute	8′
Flauto Dolce	8′
Viola	8′
Dulciana	8′
Voix Celeste	8′
Stopped Flute	4′
Violina	4′
Flute Twelfth	2⅔′
Flautina	2′
Oboe	8′
Tremulant	

Pedal Organ

	PITCH
Major Bass	16′
Dolce Gedeckt	16′
Octave Bass	8′
Diapason	8′
Violoncello	8′
Flute	4′

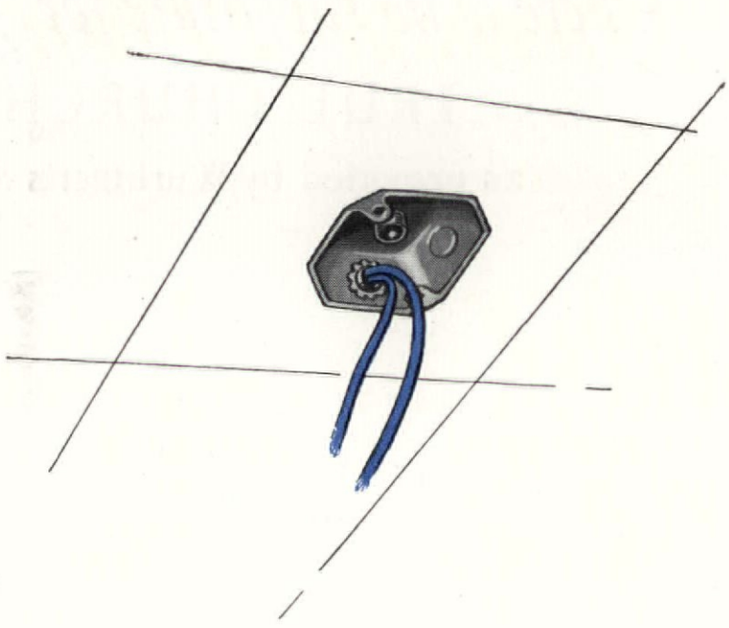


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VIZ-AID is attractively styled in quiet, good taste. It is optically engineered to give years of high-intensity, even, glare-free light. It is structurally designed for quick, economical cleaning and servicing.

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The VIZ-AID

For ceiling or suspension mounting—unit or continuous installation. Designed for two 40- or two 100-watt lamps. U. S. Patent Nos. D-138990, D-143641 and 2411952.

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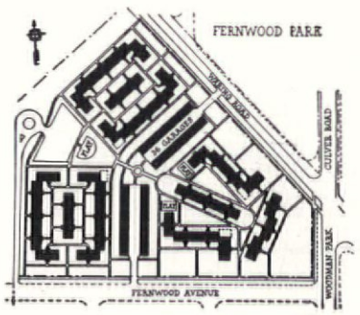
318

IT'S EASY TO SEE WHEN IT'S

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Although exterior treatment varies to give these homes individuality, each apartment has the same pleasing, compact interior arrangement.

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The Rochester Plan, one of the nation's best solutions to the war-created housing shortage, is now a glowing reality . . . only slightly over a year since its conception by the eight banks of Rochester, N. Y. Operated by bank-owned Rochester Civic Rental Project, Inc., a non-profit company, the Plan provides modern living for service veterans and their families at extremely modest rental. Each apartment has three spacious rooms, bath and kitchen complete with range, refrigerator and electric disposal unit. Service facilities include a laundry center with automatic washers, garages and play areas for children.

A distinctive feature of the project is individual apartment heating, supplied by Bryant Model VB-6 Winter Air Conditioners. A vertical forced air unit, the Bryant Model VB is made especially for installation in apartments, basementless homes or any home where space is at a premium. Bryant Heater Co., 17825 St. Clair Ave., Cleveland 10, Ohio... *One of the Dresser Industries.*

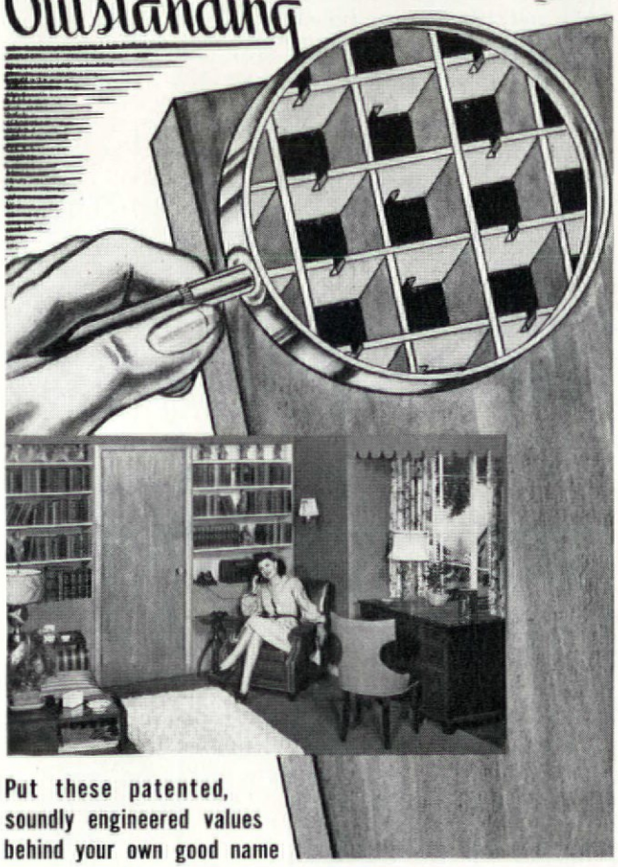
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*Because of production limitations, Rezo doors cannot yet be shipped to the Pacific Coast.

Manufactured by the PAINE LUMBER CO., Ltd. Oshkosh Wisconsin

ESTABLISHED 1853

reasonable distance of a fireproof stairway leading both to the street and to the roof of the hotel. This is the only way in which hotel guests can be assured of a fair chance of survival. Fire-escapes are inadequate as they may be swept by flames and smoke and are a hazardous means of exit for panic-stricken people. The usual open stair wells are the worst type of death trap.

The necessary fireproof stairways could easily be constructed within the outside walls of any existing hotel. The usual plan of such structures is H-shaped, L-shaped or U-shaped, dependent on their size and site. There are invariably center corridors running between parallel lines of bedrooms and past a centrally located elevator shaft and an open stair well. The first step in planning for new fire-safe stairways would be to decide on their location, preferably at the end of each corridor and also, if necessary, at one or more points between. After that, the stairways could be constructed within the space now occupied by one or more bedrooms on each floor. Few structural changes would be required in most buildings to run the stairways from a fireproof penthouse exit at roof level down to a fireproof exit way at street level.

The only additional fire precautions generally needed would be to enclose any existing open stair wells and other shaftways, to seal up any existing transoms above bedroom doors on the corridor, to divide up the length of each typical corridor by a series of smokeproof and fireproof doors so located that they were midway between two of the new fire-stairways and to eliminate any inflammable wall or ceiling finishes.

It is undoubtedly true that the average hotel owner would mourn the loss of revenue from those bedrooms sacrificed to make way for the new stairways. However, this would be a comparatively small price to pay to assure the public of safety and to redeem an obsolete structure from condemnation.

MORRIS KETCHUM, JR., Architect

New York, N. Y.

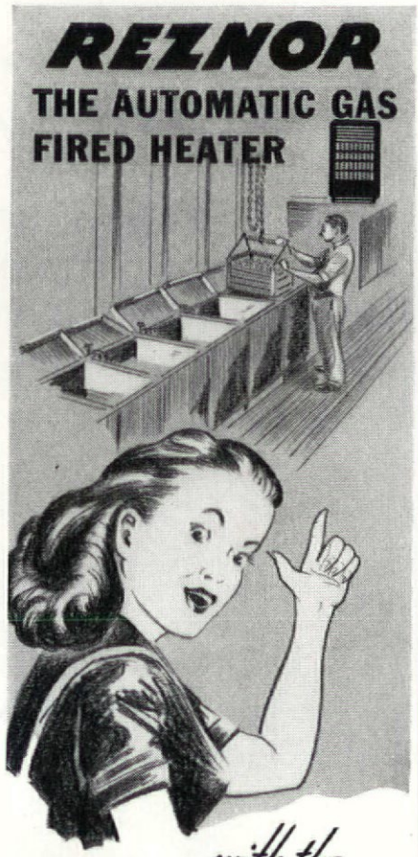
Forum:

The Pentagon Apartment Building (FORUM, Jan. '47) is quite interesting, but the first thing that strikes the eye is the lack of proper exits. I do not know what the building code of the city of Brooklyn requires, but I know that most building codes would require two independent means of exit from each apartment. In this case, that would mean at least a fire escape on each outer edge of the pentagon, making six exits in all. The two central stairways

(Continued on page 34)

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MERCER, PENNA.
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Walseal* Valves and Fittings for Making Silbraz Joints

The Walworth Company, oldest manufacturer of valves and pipe fittings in the United States, produces a complete line of Walseal Valves, Fittings, and Flanges for making Silbraz Joints — the modern method of joining brass or copper piping. For further information, see your nearest Walworth distributor, or write for Circular 84D.

**Patented — Reg. U. S. Patent Office.*

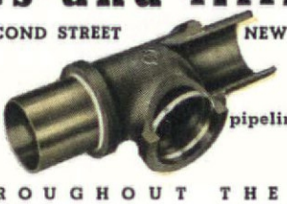


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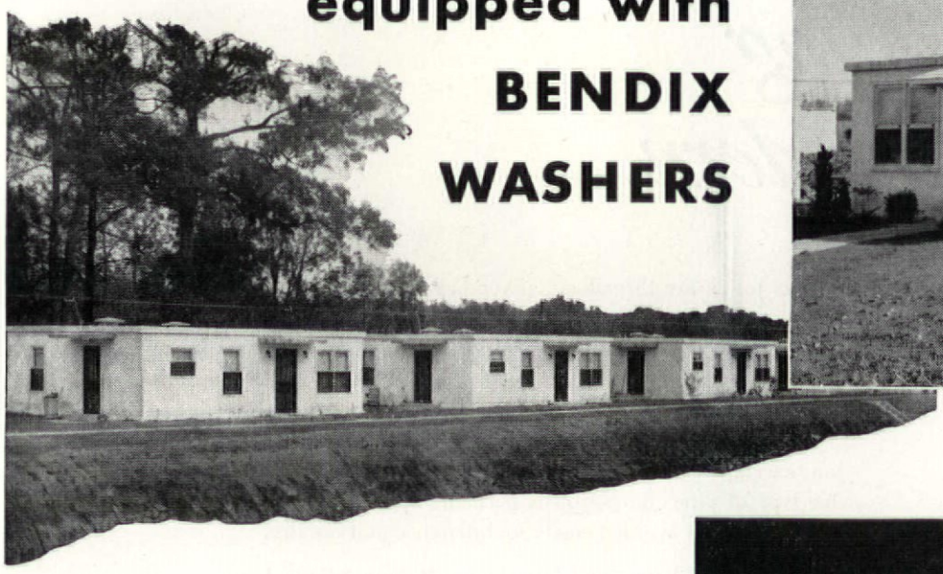
60 EAST FORTY-SECOND STREET NEW YORK 17, N. Y.

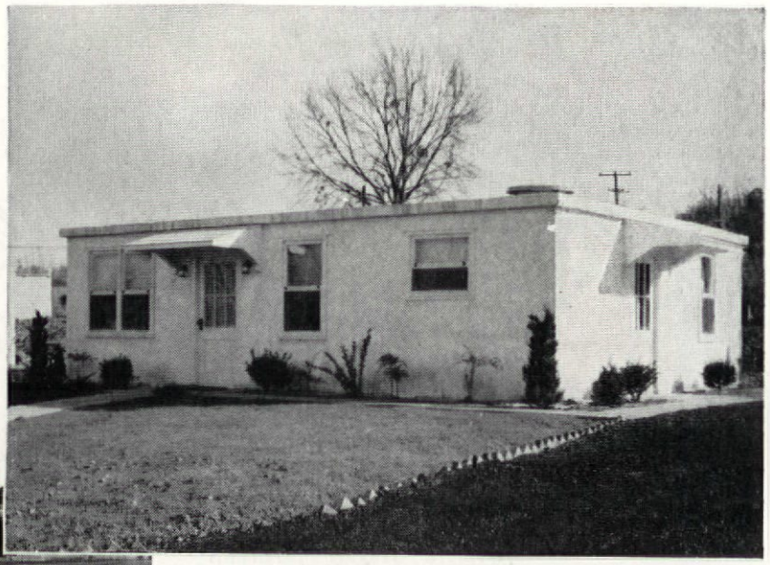


Make it a "one-piece pipeline" with Walseal

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

75 Le Tourneau Homes equipped with BENDIX WASHERS





Near Vicksburg, Miss., one of the biggest stories in mass housing is being enacted. A monolithic town is being built by that fabulous machine, the Tournalayer, developed by R. G. Le Tourneau Inc., Longview, Texas. Compact, efficient, the Tournalayer pours a concrete house as a unit—making provision for window openings, interior walls, wiring conduits—and space for the Bendix automatic Washer.

The Bendix too is compact, efficient, complete. It functions where it's set, requires no laundry tubs, and no attention. It washes, triple-rinses, damp-drys, drains itself, and shuts itself off—all in four square feet of space.

But while the Tournalayer is new, the Bendix has been doing its big job for the past 9 years.

For houses big or small, new or old; in kitchen, hall or basement, the Bendix automatic Washer provides complete work-free washing. And women like the house-plans that make provision for it. In many states the Bendix can be financed under FHA.

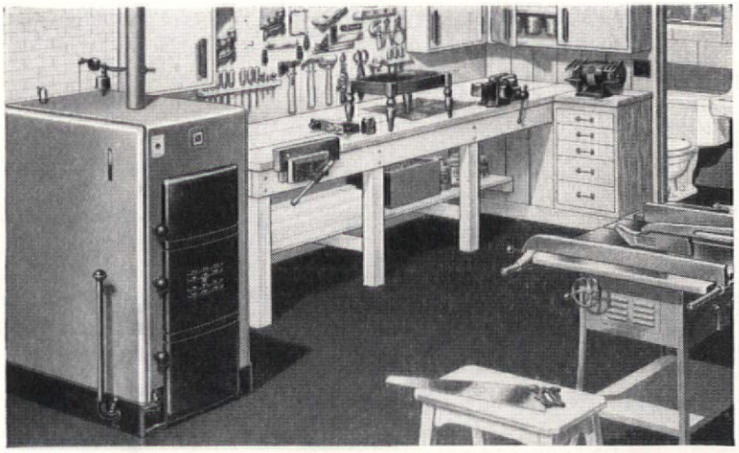
Coming Soon! Bendix automatic Ironers and Dryers.



BENDIX
automatic
Home Laundry

BENDIX HOME APPLIANCES, INC.
SOUTH BEND 24, INDIANA

Expertly engineered and sturdily built for Dependability . . .



The **SEVERN** Boiler. For small or medium size homes. Burns coal (hand-fired or stoker), oil or gas with utmost efficiency and economy. Notable among its advantages are large fuel chamber and combustion space; scientifically designed flue passages; extra large 7-inch top nipples placed partially below water line; permanent iron-to-iron fit of all sections and flues; and small water content to insure rapid circulation and quick steaming.

Smartly styled in many types and sizes for Adaptability . . .



This group includes the **MASTER PEMBROKE**, a graceful bath of Neo-Classic design featuring a lower rim, large bathing space and a flatter bottom for greater comfort and safety; the **COMPANION**, a genuine vitreous china lavatory which can be had also without legs for wall support; the **MASTER ONE-PIECE**, a compact, genuine vitreous china water closet with a quieter, more efficient syphon-vortex water action. All three pieces are available in white and many attractive colors. Also shown is the **ARCO**, a slim-tube, space-saving radiator.

AMERICAN-Standard

HEATING PLUMBING

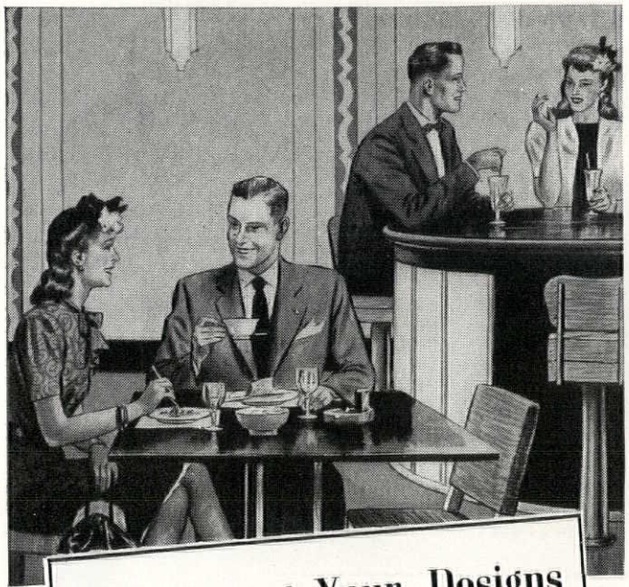
■ You'll find just the heating equipment and plumbing fixtures you need in American-Standard's extensive line. And you can be sure that whatever you select will be striking in design, efficient in performance, economical in operation, and durably constructed. For millions have been spent—in research . . . in engineering . . . in production facilities—to make American-Standard Heating Equipment and Plumbing Fixtures the finest that money can buy. Yet they cost no more than others . . . and are available for modernization on a convenient Time Payment Plan. For details, see your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation**, P. O. Box 1226, Pittsburgh 30, Pennsylvania.

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LETTERS



Complement Your Designs With The Lustrous Beauty of DECORATIVE MICARTA

Bring vivid color and lasting lustre to your interiors.

For walls, display cases, table tops, built-in fixtures . . . anywhere at all, the gleaming beauty of durable Decorative Micarta* is distinctive and modern. It blends perfectly with any decorative scheme.

Decorative Micarta will not split, chip or warp. Its beauty never fades . . . cannot be harmed by alcohol, food, grease or fruit juices. The cigarette-proof grade is unharmed by burning cigars or cigarettes.

Choose from a wide range of interesting colors and patterns. Find out how effectively this modern plastic material can brighten up your interiors. Write for full information today.

EXCLUSIVE NEW FEATURE!

Decorative Micarta cannot be scratched or marred in transit! A heavy Kraft paper "beauty mask" protects it at all times . . . even during machining and fitting . . . easily removed after installation!

*Manufactured by Westinghouse Electric Corporation.
Reg. U. S. Pat. Off.

UNITED STATES PLYWOOD CORPORATION
55 West 44th Street, New York 18, N. Y.

shown in the plan are no better than one and might just as well be made into one stairway.

Another noticeable point is the lack of service entrances to the apartments, making it necessary to handle rubbish, garbage and all deliveries through the front door. It is possible, of course, that these apartments are to be of the janitor-less type, each tenant depositing his waste in the incinerator in the main hall, in which case the visitor may be met by a line of waste baskets and garbage receivers while searching for an apartment.

S. G. ROEBLAD

Braintree, Mass.

1) No multi-story fireproof building is required to have fire escapes. Let Reader Roeblad imagine the Empire State Building if this were so, plus his chances of escaping a fire by walking 100 stories down an outside escape.

2) Besides its two elevators, the pentagonal building has two completely isolated fire stairs (which are one better than one), thus meets the requirements of New York City's rigid building code.

3) On Park Avenue a few modern apartments boast separate service entrances. The pentagon apartments are a low cost housing project.—ED.

BIZARRE PROGRESSIVENESS

Forum:

The house by R. M. Schindler (FORUM, Feb. '47) is not content with logic. Although refreshing in many respects, the house oozes with that rebellious quality of being different for the sake of being different. The soffit of the fireplace has no reason for recognizing the slope of the ceiling. I think it is a fine example of the architect's peculiarities which cannot be controlled or suppressed, seeking for recognition under the banner of progressiveness.

This is the bizarre architecture we would expect to find in lay magazines. As your offerings are for digestion or not according to our appetites, I am looking for more digestible material.

R. E. CLOUSE

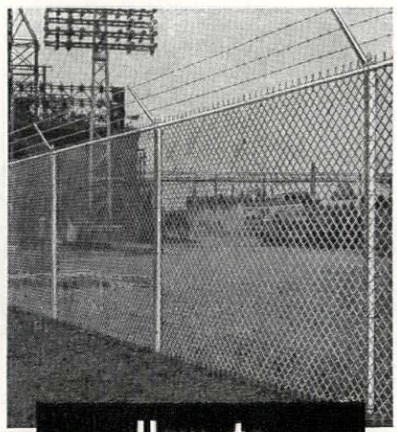
East Liverpool, Ohio

BEER POCKETBOOKS

Forum:

In the controversy over modern versus traditional furniture styles, the crucial point is consistently overlooked, and that is the matter of *price*. The public has never had a chance to express its preference in buying what it really likes, simply because modern furniture is almost invariably much more expensive than comparable pieces in traditional styles. When selecting furniture for our apartment, I wanted to get a modern

(Continued on page 38)

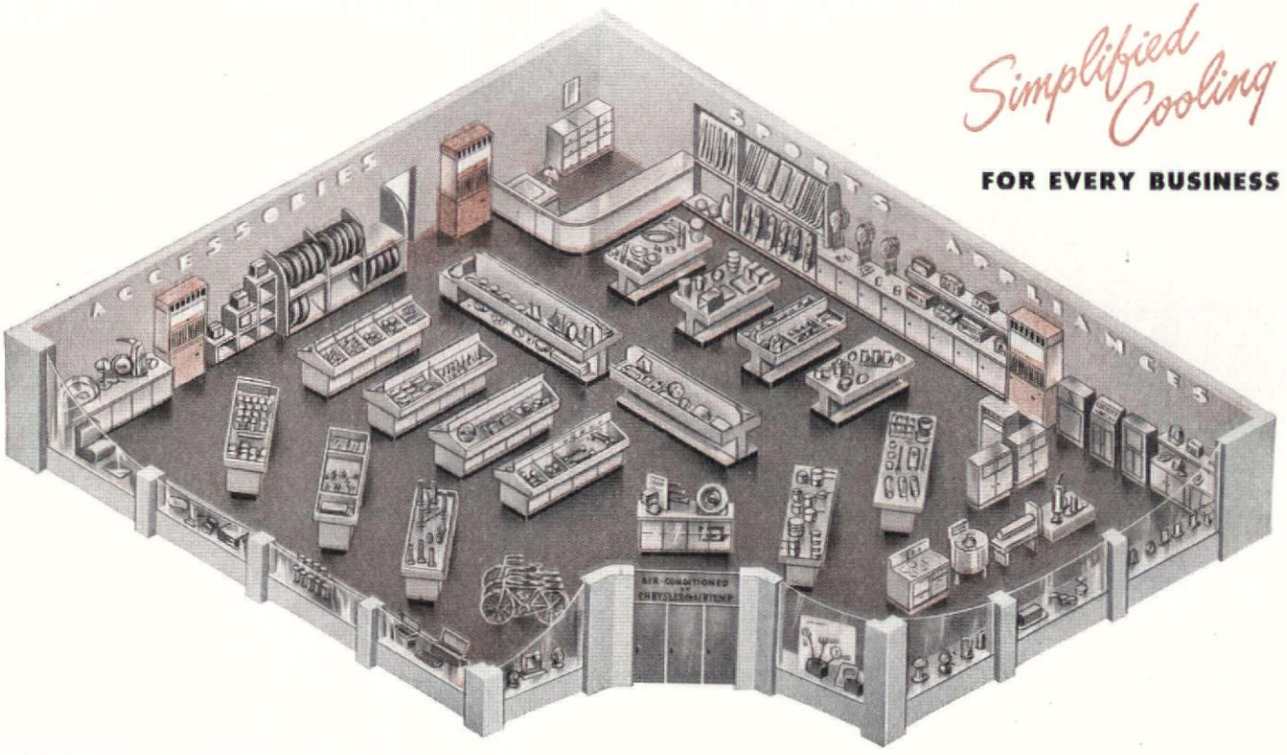


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1. *Consider these four exclusive features of Anchor Chain Link Fence* which mean all-out protection during long years of service for your clients. *Deep-Driven Anchors*, which hold the fence erect and in line, in any soil or weather, yet permit easy relocation where necessary. *Square Frame Gates*, amazingly free from warping and sagging. *U-Bar Line Posts*, self-draining, rust-free and rigid. *Square Terminal Posts*, which improve strength, durability and appearance.

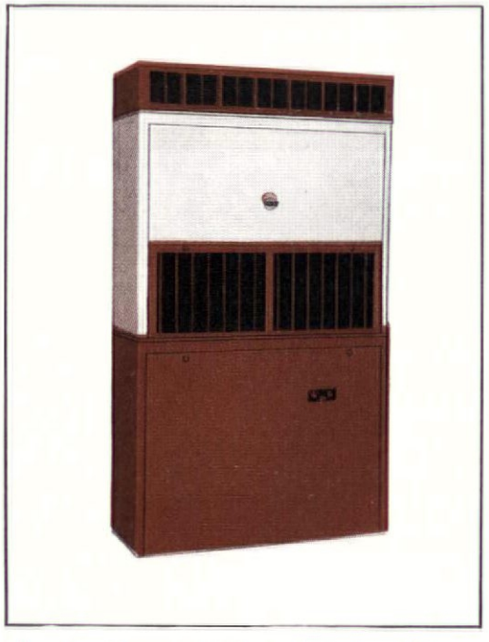
2. *Send for your free copy of our book, "Anchor Protective Fences,"* for your A. I. A. File 14-K. It's both a catalog and specification manual. Shows many types and uses of Anchor Chain Link Fence . . . pictures installations for many prominent companies and institutions . . . contains structural diagrams and specification tables. Just ask for Book No. 110. Address: ANCHOR POST FENCE Div., Anchor Post Products, Inc., 6635 Eastern Ave., Baltimore 24, Maryland.

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★ ★ ★

Alert architects are solving the problem of air conditioning large merchandise display areas, such as shown above, with Chrysler Airtemp Packaged Air Conditioners. These air conditioners fit the requirements of stores large and small. Because of compact design and ease of installation, they can be placed almost anywhere and occupy little floor space. The design is so flexible that Packaged Air Conditioners can be installed singly, or in multiple, and are easily moved when remodeling or changing store locations. Heating coils can be placed in the packages for year-round conditioning. Operating and upkeep costs are exceptionally low. For details, please write . .

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In Canada—Therm-O-Rite Products, Ltd., Toronto

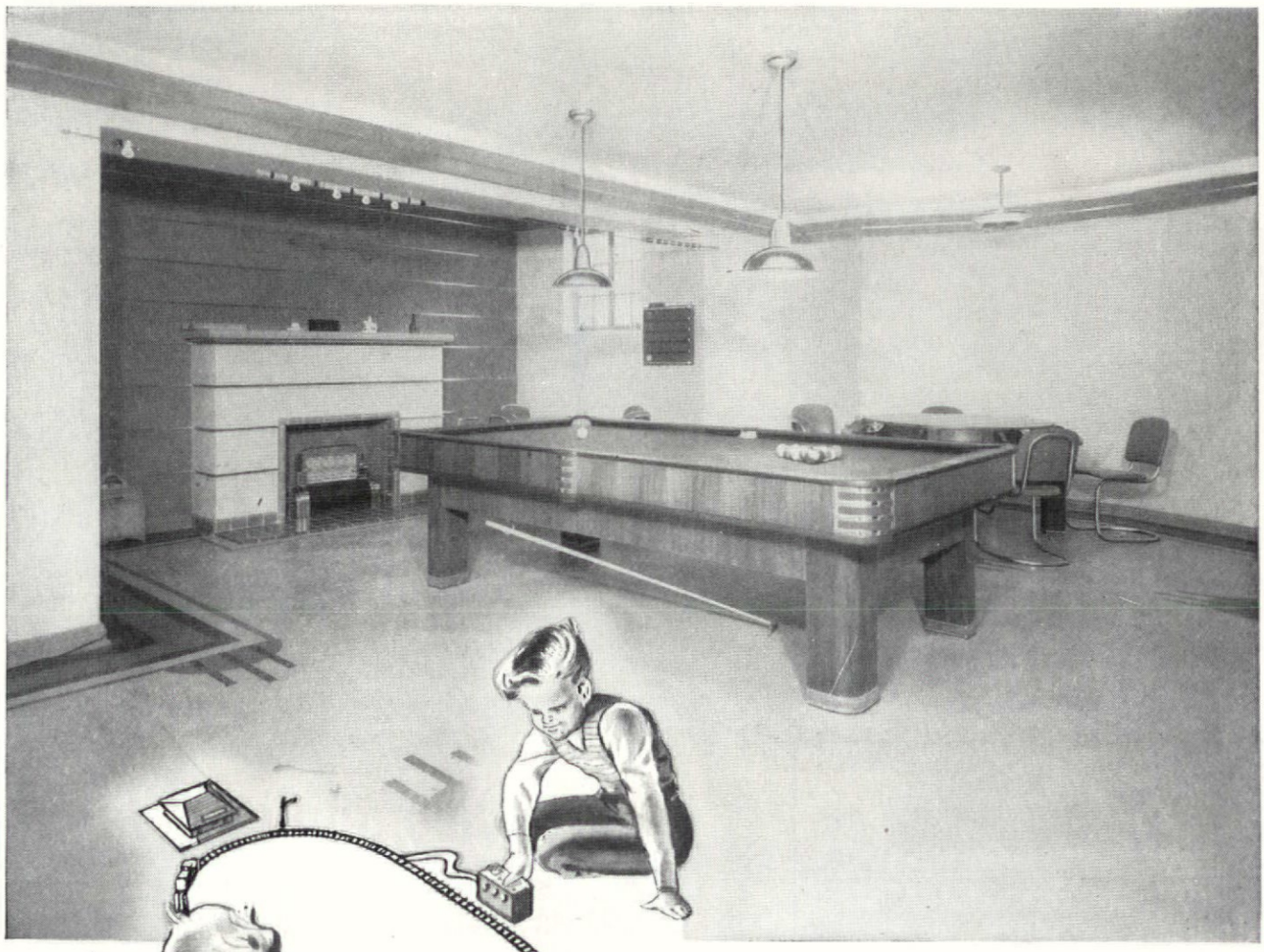
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CHRYSLER AIRTEMP
DIVISION OF CHRYSLER CORPORATION

PACKAGED AIR CONDITIONING

HEATING • AIR CONDITIONING • COMMERCIAL REFRIGERATION



It's fun to play in the basement

when the floor is so cozy and dry

A basement is a great place for the family recreation room—if you can beat the cold and dampness which works its way up through below grade, non-waterproofed concrete floors.

The best way to overcome this threat to family fun and health—and provide your clients with handsome, easily maintained, all-purpose floors in the bargain—is to specify Tile-Tex Asphalt Tile. Here's a flooring that's highly moisture-resistant. There is nothing used in its composition which might cause it to rot or disintegrate. Naturally, floors of Tile-Tex are cozy and dry—safer, cleaner play surfaces for young children.

What's more, Tile-Tex makes a smart-looking recreation room floor. It's available in a wide range of bright, stimulating game room colors, plus decorative accessories—which make possible an endless variety of designs. Its smooth, closely textured surface cleans easily—stubbornly resists stains and scars—and is comfortable under foot. Most important, too, is the tough ruggedness of Tile-Tex that gives it the extra value of long life.

Please write us if we can help you in any way with problems of asphalt tile floor design.

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WHAT IT CONTAINS

- FUNDAMENTALS OF KITCHEN PLANNING
- BASIC KITCHEN LAYOUTS
- DESIGN DETAILS
- KITCHEN LIGHTING
- ELECTRIC OUTLETS AND CIRCUITS
- APPLICATION TO SPECIFIC HOMES
- KITCHEN EQUIPMENT

Now-a new book that makes kitchen planning easy!

This new book explains fully the principles of kitchen planning. Eliminates hours of detailing by using the 64 standardized layouts that are adaptable to practically any kitchen. Basic kitchen layouts are clearly indexed so that you may quickly find a design to meet specific requirements.

All layouts are detailed to scale, permitting quick tracing. Elevations and a complete list of materials are included for each design. Four pages of details are given, showing location of doors and windows to assure clearance of kitchen equipment, furring above cabinets, etc.

Efficient methods of lighting and ventilating kitchens are also included. Proper circuits and required number of electrical outlets are specified. Detailed product data, is given along with dimensions and brief specifications. The most unique and practical design book ever produced on kitchen planning. Costs $1.00. Other booklets that may help you are "4 Degrees of Electrical Living" (Free), and "Home Wiring Handbook" ($1.00).

J-91549

Westinghouse

PLANTS IN 25 CITIES... OFFICES EVERYWHERE

BETTER HOMES DEPARTMENT

Westinghouse Electric Corporation
P. O. Box 868
Pittsburgh 30, Pa.

Gentlemen: Please send booklets that are checked:

- ☐ Kitchen Planning Manual ($1.00 enclosed)
- ☐ 4 Degrees of Electrical Living (Free)
- ☐ Home Wiring Handbook ($1.00 enclosed)

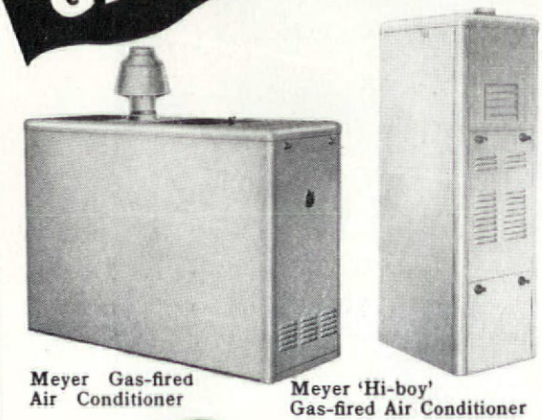
Name_____

Street_____

City_____ Zone_____ State_____

AUTOMATIC HEAT with GAS or OIL

GAS

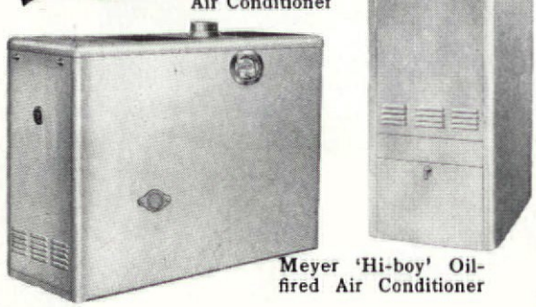


Meyer Gas-fired Air Conditioner

Meyer 'Hi-boy' Gas-fired Air Conditioner

OIL

Meyer Oil-fired Air Conditioner



Meyer 'Hi-boy' Oil-fired Air Conditioner

WEIR-MEYER MEANS *Modern Heat*

For any fuel, specify WEIR-MEYER. Custom-fitted units available for residential, commercial, or industrial installations. WEIR-MEYER "lifetime" heating plants insure fine performance, economy, ease of installation and freedom from servicing. Post-war improvements are incorporated in WEIR-MEYER equipment. Write for descriptive literature and performance data.

The MEYER FURNACE Company

PEORIA 2, ILLINOIS

MANUFACTURERS OF WEIR-MEYER FURNACES

Air Conditioners for GAS · OIL · COAL

OFFICES: PEORIA 2, ILL. FACTORIES: PEORIA & PERU, ILL.

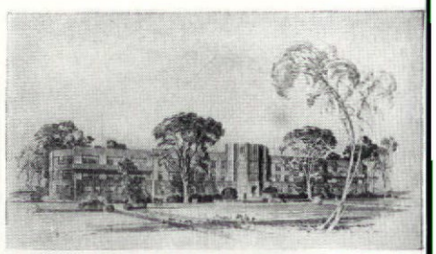
dining table and chairs. However, I could afford to pay only $75 and all the modern sets came to well over $200. We just couldn't pay that, so we got a reddish-maple set—which is not too bad except that it looks vaguely as if it had wandered out of an Italian monastery. The legs of the table and chairs are unnecessarily massive and have numerous dust-catching carvings. The same amount of wood could easily have been made into a plain modern set, but then, no doubt, it would have cost twice as much.

Having read and agreed with most of George Nelson's article on the furniture industry in *Fortune*, I was delighted to read in the FORUM that Mr. Nelson was designing some modern furniture. Imagine my joy upon seeing, in yesterday's *New York Times*, a full page advertisement showing Mr. Nelson's creations as displayed by a large New York department store (Bloomingdale's). The style, the type of pieces, were just what my husband and I have been wanting for a long time. Then I noticed the prices. It was the same old story: a 24 in. chest for $139.50; a 40 in. chest for $169.50; a 34 in. china cabinet for $209 (three of these placed together make a fine sideboard); a bed headboard for $119.50. And so on.

Of course modern doesn't sell—at such prices. Maybe these creations of Mr. Nelson's are worth the money, but I seriously doubt that they will help him "prove that there is a profitable difference between juke box modern and design geared to modern living needs and production methods." There has always been a small amount of modern furniture available to those who could pay high prices for it; it seems to me that Mr. Nelson has done nothing but add a new line of well-designed pieces to this stock. But the saleability of modern will never be proved by continuously catering to this same market. And you can't sell to the average American as long as it would take him a year's salary to furnish one room.

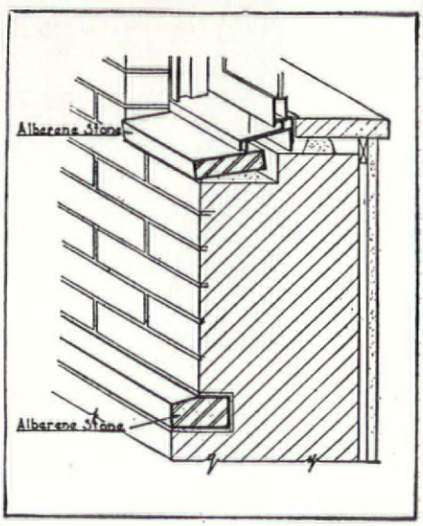
Aside from a few well-heeled people of advanced tastes, modern furniture makes its greatest appeal to young people, those who have had a little exposure to it, who because of lack of space and uncertain plans want sectional and interchangeable pieces, and who do not already have a houseful of antiques or borax, with which modern pieces would not go. These people cannot pay $466.50 for a dining table and six chairs (the quoted price for Mr. N's stuff), but could pay perhaps half of that. They can't find any modern at the lower price, so they buy traditional. And there goes another potential modern customer.

(Continued on page 42)



Riverside Hospital, Tuberculosis Pavilion, No. Brother Island, N. Y., N. Y., Electus D. Litchfield, Architect.

Sills, coping and trim of Alberene Stone



Detail showing 1¾" thick Slip Sill, and 2¼" thick Belt Course of Alberene Stone as used in Riverside Hospital. At circular sections, Sills carry through to form a band course. Alberene Stone used for roof and balcony copings, also.

Alberene Stone is ideal for exterior use because it is impervious to moisture; it does not chip, scale or split. Its natural light blue-gray tone harmonizes with practically any other colors. The fact that it can be cut into thin sections makes for definite economies. Used for sills, coping, spandrels, exterior or interior trim. Alberene Stone is free for all time of maintenance costs. Our Mills in Virginia are the largest in the country devoted to producing special purpose quarried stone. Inquiries will receive immediate attention. *Alberene Stone Corporation of Virginia, 419 Fourth Avenue, New York 16, N. Y. Quarries and Mills at Schuyler, Virginia. Sales Offices in Principal Cities.*

ALBERENE STONE

DURABLE, COLORFUL AND ECONOMICAL

Firestone Velon*



Better-than-leather!

Firestone *Velon*, magic material of thousands of forms and uses, now looks and feels like leather . . . but *wears even better!*

Fine for covering cabinets, inlaying, as well as upholstering, *better-than-leather Velon* remains trim with years of use, abuse *and won't scuff, crack or peel!*

Fade-proof *better-than-leather Velon*, like woven *Velon* fabrics, makes light or bright upholstering practical, for even grime *wipes off with a damp cloth!*

Plan on *Velon* for beautiful, practical interiors . . . and write to Firestone, Akron for list of suppliers and the *Velon* booklet.

Meeting with complete approval

BEST TODAY—STILL BETTER TOMORROW

Listen to the Voice of Firestone Monday Evenings Over NBC

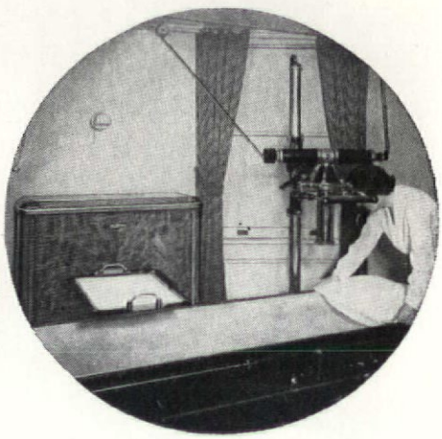
*TRADE MARK

Five things to remember

WHEN YOU PLAN AIR CONDITIONING FOR AN OFFICE









1. COOLING*

Not too cold nor too warm —cool comfort even on hottest days.



2. DEHUMIDIFICATION*

Wrings mugginess out of the air. Proper humidity level all year round.



3. CIRCULATION

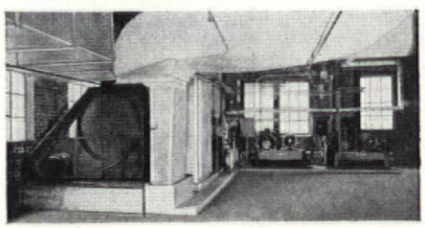
Air is gently circulated for uniform coolness throughout the conditioned area.

FEW THINGS in your plans for an office can bring you more day-to-day customer good will . . . or provide more employee health and satisfaction than Better Air Conditioning.

That is why General Electric Better Air Conditioning is engineered for comfort rather than *just cooling.* Based on years of field and laboratory tests, General Electric air conditioning equipment combines adequate Cooling* with Dehumidification*, Circulation, Filtration and Ventilation. To be certain your client will get *all five benefits*, specify and insist on General Electric.

Your General Electric distributor or contractor will be glad to help you with cost-reducing layouts and designs. Call him . . . or the local representative of the General Electric Air Conditioning Department today. For summary specifications see Sweets, Section 29A-6. *General Electric Co., Air Conditioning Department, Section 7134, Bloomfield, N. J.*

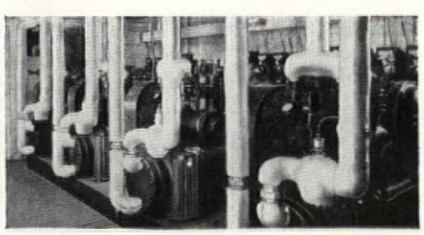
*In winter Better Air Conditioning includes controlled heat and humidification.





4. FILTRATION

Dust and dirt are removed by large, efficient filters.





5. VENTILATION

Maintains fresh atmosphere by introducing plenty of outdoor air.

GENERAL ELECTRIC

Better Air Conditioning

Takes planning modern kitchens out of the "pig-in-a-poke" class

American KITCHENS STYLED IN STEEL PLAN-A-KIT

shows prospect HER EXACT KITCHEN-TO-BE . . .

not just pictures and words

1st STEP

Your prospect's kitchen is measured. Locations of windows, doors, offsets, exposed pipes, etc., are noted.



Simple 3-STEP Method follows through with you on National Advertising

Following powerful national advertising, *American Kitchens* supply you with the simplest, most convincing and sure-fire planning tool ever developed in the home equipment field. This is the PLAN-A-KIT. It shows your prospect exactly what she is getting—duplicates exactly and in miniature her kitchen-to-be with every door and window, every piece of equipment (cabinets, sink, stove, refrigerator) in place. She buys her *own kitchen*, not a picture of some other woman's kitchen—not a "pig in a poke."

The PLAN-A-KIT eliminates the old-fashioned, time-wasting paper and pencil method; is just one more reason why the *American Kitchen* Line is so profitable in *the biggest market in the home equipment field.*



2nd STEP

The PLAN-A-KIT creates an exact miniature duplicate of her kitchen with all pieces of equipment in place. The triplicate Plan-a-Paper makes three "blueprints." She can have the entire kitchen at once —or add to it unit by unit.



3rd STEP

The rest is simple. Her kitchen is installed. She sees her miniature dream kitchen created before her delighted eyes.

AMERICAN CENTRAL Division— The Aviation Corporation, Connersville, Ind.

American KITCHENS STYLED IN STEEL

LETTERS

How much DUCT for a DOLLAR?



Reynolds Aluminum for Duct Work . . . Looks Better, Lasts Longer, More Efficient, Yet Costs No More Installed Than Conventional Material

MEASURE duct costs by *complete* installation charges and you'll know that Reynolds Aluminum . . . the modern, premium material . . . costs no more than conventional material.

Here's the proof: At today's prices, Reynolds Aluminum Sheet costs only 6% more per square foot than conventional duct material, and remember, aluminum is light weight. You get 3½ times larger working surface per pound. And light weight and good workability means additional savings; less time to fabricate; less time and less effort to erect. You save on the supporting structure and, because aluminum has a finished appearance, no paint is necessary. There is more customer satisfaction too, better appearance, quieter operation, greater heating efficiency, and freedom from rust and corrosion.

Measure duct costs this way and you can recommend a better job at no extra cost. Write today for descriptive bulletin and the name of your nearest jobber who stocks Reynolds Aluminum. Reynolds Metals Company, Aluminum Division, 2528 South Third Street, Louisville 1, Kentucky.

IF YOU SEE RUST YOU KNOW IT'S NOT ALUMINUM

REYNOLDS ALUMINUM

Lifetime ALUMINUM

It is quite possible that silver walnut and primavera veneers, ebonized legs, etc. necessitate very high prices to the consumer; but not all of us demand these niceties. We would be pretty well satisfied with functional design in one of the less expensive woods or plywoods. As it is, the nearest we can get to modern is unpainted furniture, most of which is now so poorly made that it soon falls to pieces.

There are plenty of good modern designers; what is needed is a manufacturer who will put out modern designs in modest materials at prices which are within reach. If Sweden can do it, why can't the U. S.?

MARGARET K. WILSON
Fort Devens, Mass.

FORUM grants that many American homes must remain unfurnished by Nelson modern, points out that there are a few lines priced at approximately half his tag. The joker in modern furniture prices is that low-grade wood shows up in plain designs, can be camouflaged with the carving and curlicues of period pieces.—ED.

FOREIGN FILES

Forum:

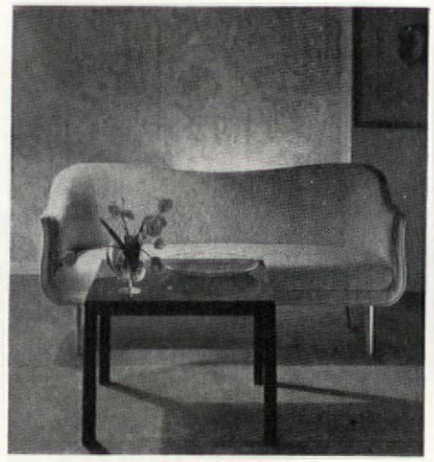
The work of the American Book Center has already gone far toward supplying scientific and technical materials needed in the rebuilding of devastated countries. Both the quantity and the quality of materials given to us for distribution have been surprisingly high. Libraries have furnished a great amount of valuable material, and publishers have sent many thousands of choice items from their stocks.

However, our work has now reached the point at which it seems advisable to make appeals for certain specific publications of the maximum usefulness. I am, therefore, writing to inquire whether your readers might be able to make available to us files of the FORUM now held as excess stock. Many files of this periodical have already gone overseas but we should like to send as many additional sets as possible. We are especially interested in publications of the war years, but files of the Architectural FORUM prior to 1939 will also be very helpful.

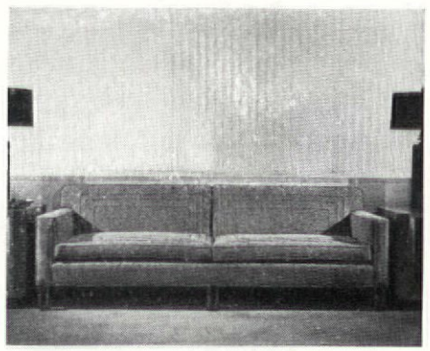
A request for material as valuable as this is not, I assure you, made lightly. It is dictated by the necessity for furnishing scholars long deprived of American books and periodicals with those materials which they specifically need. . . .

LAURENCE J. KIPP,
Acting Executive Director
American Book Center for War Devastated Libraries, Inc.
Library of Congress
Washington, D. C.

(Continued on page 46)



DUNBAR *for* MODERN



THREE SOFAS
OF VARYING DESIGN

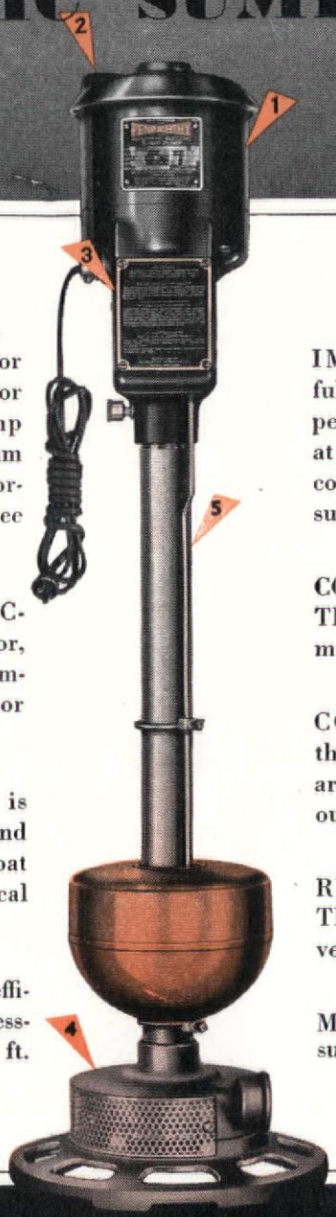
DUNBAR FURNITURE MANUFACTURING CO.
BERNE, INDIANA
1638 Merchandise Mart, CHICAGO 54, ILL.
385 Madison Ave., NEW YORK 17, N.Y.
203 Clarendon St., BOSTON 16, MASS.



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PENBERTHY AUTOMATIC ELECTRIC SUMP PUMP



1 MOTOR—¼ hp capacitor type special vertical motor designed expressly for sump pump operation has maximum resistance to moisture and corrosion, and is practically free from radio interference.

2 OVERLOAD PROTECTION—Built into motor, protects motor in case of improper voltages, overloading or trouble of any kind.

3 MERCURY SWITCH is sensitive, dependable and particularly adapted to float operation. It has no mechanical contacts to wear or spark.

4 IMPELLER has high efficiency and operates successfully against a head of 22 ft.

5 IMPELLER SHAFT is fully enclosed and held in perfect alignment by bearings at both ends. Flexible spring coupling relieves motor shaft of sudden starting shocks.

6 COPPER AND BRONZE THROUGHOUT; it is immune to corrosion.

7 COMPACT DESIGN—there are no protruding arms or levers to bend and get out of order.

8 RUGGED CONSTRUCTION assures long life and very satisfactory operation.

9 Made in FIVE SIZES for sump depths, from 2 to 8 ft.

PENBERTHY INJECTOR COMPANY

DETROIT 2, MICHIGAN

Established in 1886

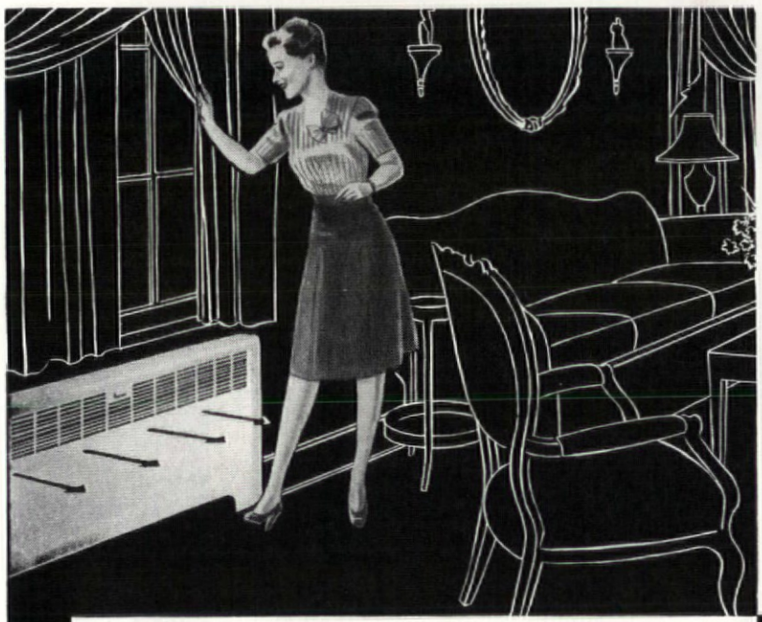
PENBERTHY PRODUCTS

Canadian Plant, Windsor, Ont.

radiant heat + **convection heat** =

MODERN HEATING AT ITS BEST!

that's what Modine Convectors offer you!





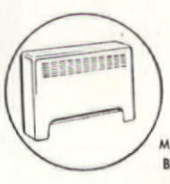
1 RADIANT HEATING

Notice those arrows? That's radiant heat . . . mild radiant heat coming from that Modine Convector Panel in just enough quantity to offset heat loss from window areas. But we don't stop with just *radiant* heating. To it we add—

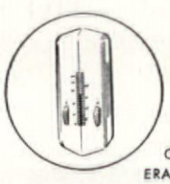
2 CONVECTION HEATING

Convection heating. The hot water or steam circulates through the copper heating unit, draws the cooler, floor-line air into the bottom of the convector where it's warmed, rises, and is then gently circulated throughout the room.

Result: A modern, blended heating system for modern living! • A heating system that gives you *individual* room control, that responds almost instantaneously to sensitive automatic controls . . . that gives you gentle air circulation without the use of moving parts that wear out. • Yes . . . think of the dependable heating comfort, distinctive charm, space-saving, cleanliness and long service life of Modine Convector Radiation for moderate cost homes and apartments. Look for Modine's representative in the "Where to Buy it" section of your phone book. • Write for complete information and free descriptive literature. MODINE MANUFACTURING CO. 1736 Racine St., Racine, Wis.



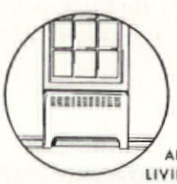
MODERN BEAUTY



CLOSE TEMPERATURE CONTROL



EASY TO INSTALL



ADDS TO LIVING SPACE



COSTS NO MORE THAN CONVENTIONAL RADIATORS

Modine

CONVECTOR RADIATION

The Modern "proved by use" heating method



Stran-Steel framing is a building product of Great Lakes Steel Corporation

YOU NAIL TO STRAN STEEL FRAMING

When they use Stran-Steel packaged framing for the first time, architects and builders alike are surprised that steel can be so easy to work with. Consisting of only a few basic types of framing members and fittings, the Stran-Steel system is simple and efficient. Yet it allows full flexibility of design. Practically any type of framing connection is possible, and any standard collaterals can be used.

Two unique construction features make Stran-Steel packaged framing ideally suited for light-load buildings. One is the fact that members can be quickly assembled with self-threading screws. The other is the patented *nailing groove*, an integral part of every Stran-Steel stud and joist. By means of this groove, collaterals can be nailed directly to the frame, just as easily as to wood.

By virtue of its efficiency, Stran-Steel is *economical*. To prospective owners it represents a sound investment in long building life, simplified maintenance and added fire protection.

BUILD WITH

STRAN STEEL



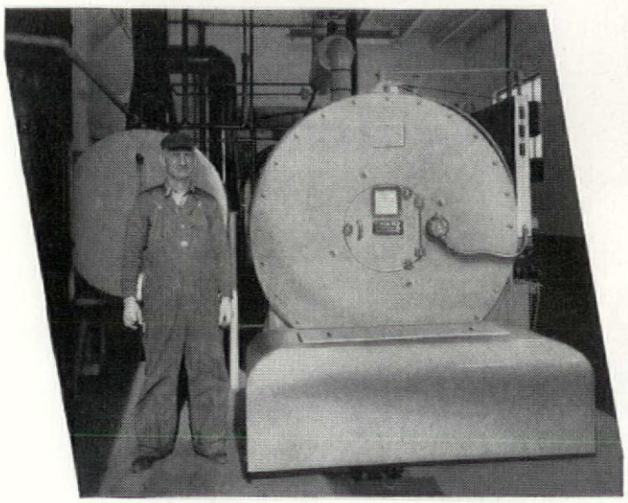
GREAT LAKES STEEL CORPORATION

Stran-Steel Division • Dept. 35 • Penobscot Building • Detroit 26, Michigan

UNIT OF NATIONAL STEEL CORPORATION

LETTERS

priceless quality
precision combustion



the **ARCHITECT**
the **BUILDER**
the **CONTRACTOR**
the **ENGINEER**
and most of all
the **USER**

ALL PREFER STEAM-PAKS

Why?—Because alone among all "packaged" steam plants built today, *Steam-Pak Generators* possess that in-built quality . . . that assurance of customer satisfaction . . . inherent in a York-Shipley product.

When you buy or specify a *Steam-Pak Generator*, you are getting a dependable product manufactured by the greatest name in oil heating—with exclusive advantages and really worthwhile features.

Today, low pressure *Steam-Paks* are being produced in volume in the 30, 50, 75, and 100 h.p. sizes. These are the ideal units for automatic heating or hot water production, in any known application. Industrial Division, York-Shipley, Inc., York, Pa.

Steam-Pak Generators are described in Catalogs ID-47-8D and ID-46-1D, yours on written request.

YORK-SHIPLEY
Oil-Fired Equipment for Industry
AMERICA'S MOST COMPLETE LINE

LABOR SUPPLY

Forum:

We have found your Building Forecast (FORUM, Jan. '47) extremely interesting, but must take exception to the statement that "government and labor do not seem concerned about the supply of building labor."

. . . For nearly a year now the Office of the Housing Expediter, through its labor specialists in headquarters and regional offices, has been concentrating on labor supply, training and utilization. It must be remembered, however, that this program has been operating without the benefit of government controls and regulations. It depends for success upon the initiative and follow-through of organized labor, builders, contractors and local school officials, as well as federal agencies. At the federal level, the Apprentice Training Service increased its field staff and concentrated its efforts on increasing the training of building craftsmen. As a result, the number of apprentices in the building trades was increased from 20,000 in January, 1946 to 90,000 by the end of the year. Although admittedly inadequate, this represents quite a commendable achievement.

Representatives of government agencies and of labor have taken many steps to increase the supply of construction workers. Aside from apprenticeship, they have conducted intensive recruiting campaigns to bring men back into the building industry and have arranged for the establishment of labor pools in order that workers may be loaned from one contractor to another, permitting fuller utilization. Naturally, our major emphasis has been on labor for housing construction and in some instances it has been possible to meet emergencies on such projects through voluntary priority referral systems.

. . . In spite of increases, however, we are greatly concerned about the supply of labor for the volume of construction anticipated in 1947. The solution to the supply problem rests, in the final analysis, on local action. If community leaders, representing both management and labor, do not take the necessary steps to assure a sufficient supply of labor, there is little the federal government can do to aid. Our efforts have been devoted to making the community leaders aware of the problem and some of the steps that could be taken. Beyond that, the responsibility lies with the community to follow through. . . .

E. R. LERNER, Director
Labor Branch
Office of the Housing Expediter
Washington, D. C.

(Publisher's Letter on page 50)

FOR PRODUCT DISTINCTION

GE MULTI-WEAVE

ARCHITECTS and industrial designers are beginning to find in General Electric Multi-Weave fresh possibilities that offer freedom from conventional methods of treatment in structure, decorative effect and detail.

Employing strips of such basic metals as copper, brass, aluminum and stainless steel, Multi-Weave permits brilliant and artistic design development with a wide range of flexibility in application.

Completely modern in concept, Multi-Weave will suggest many uses to the imagination of the designer.

To those interested in striking a new and bolder note in planning any product—from utilitarian to luxury items, radio grilles to locomotives—this process, General Electric Multi-Weave, offers a medium unlimited in its possibilities.

For complete information write: *General Electric Company, Electronics Department, Syracuse 1, New York.*

167-F2

GENERAL ELECTRIC





SOON we'll see plenty of smart new homes under way, like those at the left. Maybe you remember seeing some of these pictures in National Gypsum's big full-color campaign in the Saturday Evening Post. (All during 1946 and begun again this year with the February 22nd issue.)

In America, the land of beautiful homes, it's amazing how many families put most everything else ahead of owning a home of their own. So, this series of Post ads is designed to:

1. Promote the thrill and life-long satisfaction of building a home NOW!
2. Emphasize how new homes offer greater comfort, lasting beauty and fire protection through the use of fireproof products such as Gold Bond Rock Wool Insulation, Gypsum Sheathing, Gypsum Lath and Plaster.

All told there are over 150 Gold Bond building materials—each product researched and engineered to do a specific job better. When Gold Bond products are specified and used exclusively, it centers responsibility with one reliable manufacturer, a definite advantage from the standpoint of the architect, builder and owner. The full Gold Bond line is described in our section in Sweet's.

You'll build or remodel better with Gold Bond

NATIONAL GYPSUM COMPANY · BUFFALO 2, N. Y.

Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.



Every week TIME will follow reader **Richard P. Tumpowsky** into this new home soon to be completed for him in Spencer Glen, Harrison, N. Y.

Reisner & Urbahn, Architects

Presenting THE SHOW-ROOM HOMES *of the Nation*

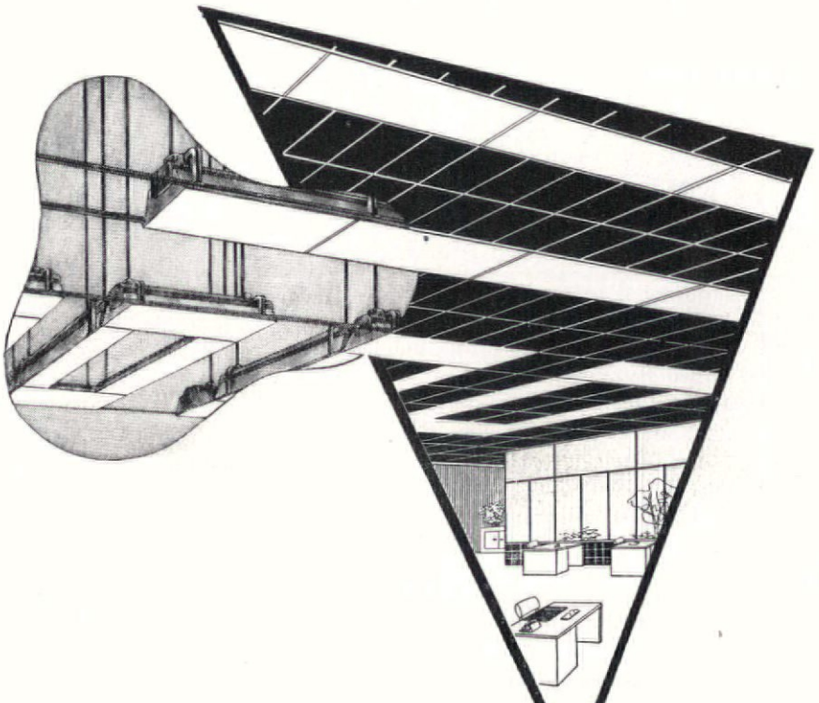
More than 410,000 new homes are in the idea stage, the planning stage, or actually the building stage—for the families who read TIME. Of course, they won't all look like Mr. Tumpowsky's, above. But, modern or traditional, they're pretty sure to be homes that will sell new designs-for-living to other families all across the country.

For the 1,500,000 news-minded families who read TIME are receptive to news and ideas about building, as about everything else. And they have the personal incomes (more than double the U.S. family average) to build and maintain the looked-up-to "show-room" homes of the nation.

Once your products are established with the readers of TIME, they're accepted by others all down the line. When you sell the TIME market first, you go right on to win even more customers among the many millions who follow the TIME example.

THE GATEWAY TO THE BUILDING MARKET — TIME

ADVERTISING OFFICES • NEW YORK • CHICAGO • BOSTON • PHILADELPHIA
CLEVELAND • DETROIT • ST. LOUIS • SAN FRANCISCO • TORONTO • MONTREAL



Good lighting, plus ceilings unlimited ..one lighting system gives you both

CEILINGS UNLIMITED — a boundless new field for the use of light as a structural aid in interior design is the added benefit offered stores, offices, schools, factories and public buildings through the installation of MILLER FLUORESCENT TROFFER LIGHTING SYSTEMS.

THE MILLER CEILING FURRING HANGER (patented) — which supports structural ceiling and TROFFER lighting system — simplifies installation and makes possible a versatility of lighting applications to form any ceiling pattern desired — CEILINGS UNLIMITED.

More! Installation is simplified. Less than half usual number of supports needed from structural ceiling. Wiring costs cut up to 50%, and conduit and conduit fitting costs up to 80%.

Miller Lighting service is all-inclusive. Its 50 and 100 FOOT CANDLERS (Continuous Wireway Fluorescent Lighting Systems) have been established as standard for general factory lighting. And its Incandescent and Mercury Vapor reflector equipment have broad factory and commercial application.

MILLER field engineers and distributors, conveniently located, are at your call.

THE MILLER COMPANY

ILLUMINATING DIVISION, MERIDEN, CONNECTICUT

ILLUMINATING DIVISION: Fluorescent, Incandescent, Mercury Lighting Equipment. HEATING PRODUCTS DIVISION: Domestic Oil Burners and Liquid Fuel Devices. ROLLING MILL DIVISION: Phosphor Bronze and Brass in Sheets, Strips and Rolls.



Insures low maintenance costs

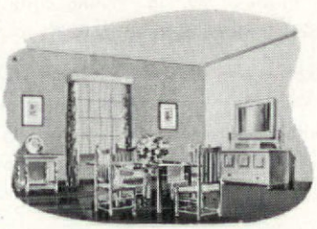
Weather plays a very important part in the maintenance costs of homes—but not when you use Homasote Insulating and Building Board. This wood fibre board is *weatherproof* . . . a fact attested by letters from hundreds of home owners.



Homasote offers a combination of great structural strength with high insulating value *in one material.* Because Homasote comes in big sheets (up to 8′ x 14′)—you have less handling, fewer nailings, fewer wall joints, less waste.

Homasote is *practical*—use it for interior walls; see the fine crackproof base it provides . . . perfect for paint or wallpaper. Add roof and sidewall sheathing of Homasote to get top *insulating value.* And *for strength* as well as insulation —use Homasote for subflooring, ceiling and exterior walls.

Homasote has proved itself by 30 years of successful application on residences, garages and structures of many different types.



We invite architects and builders to send for a copy of our new booklet, describing some of the many uses for *weatherproof* Homasote. The book gives physical characteristics, performance charts, specification data and application instructions. Write for your copy today.

HOMASOTE COMPANY, Trenton 3, N. J.

A LETTER FROM THE PUBLISHER

If you sit down in the club car of the "Twentieth Century,"* and your neighbor starts reading the FORUM, don't be



surprised if he turns out to be Mayor Jenkins (1046-H) of Amarillo. Public officials vitally concerned with Building started discovering the FORUM ten years ago, and their number grows.

. . . or he might be Vice President Harry Templeton (55-547-ZH-18852) of the Cleveland Trust Company. Most bankers responsible for major Building decisions are regular FORUM readers.

. . . or he might be Fred Schmidt (246-HH), Vice President of United Rexall. Executives in the food, drug, apparel and entertainment chains are among the FORUM's most enthusiastic followers.

. . . or he might be President K. T. Keller (N4-147-ZHH-19773) of Chrysler Corporation. FORUM subscribers in industrial corporations are at the top and the group is sizeable.

. . . or he might be J. B. Herndon, Jr. (37-347-233976), Vice President of the Hilton Hotels. Hilton and the other great hotel chains are always building, remodeling and maintaining. And the men who control these matters are reading the FORUM.

* * *

The reason such people find their way to the FORUM and find the FORUM what they need and like is easily explained. Their interest in Building is that of the continuous client. The companies and institutions they represent, year in and year out, are engaged in building operations on a major scale. Often their annual construction bill reaches a multimillion total.

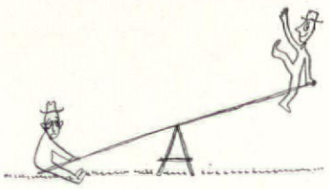


Such readers as these are, of course, additions to the FORUM's fine readership in the design professions, construction, distribution, realty, management, financing and all the other groups which, together, make up that gargantuan complex—the Building Industry.

Never has there been a time when Building was called on to play so large a part in the economic and social development of the U. S. The decade which starts now is sure to be the greatest in Building's history any way you want to measure it.

It was not without a sense of the Industry's destiny that FORUM's publishers back in 1935 saw a need for one magazine which would talk authoritatively to the men who control Building as it moves from the idea through "Work In Progress" to a cloud-piercing skyscraper or a mammoth airport or a new community.

Over these twelve years past, the FORUM has had its ups and downs, along



with the Industry, but its readership has never grown less avid. This month FORUM passes the 60,000 circulation mark—not a small group numerically—and measured in influence on our way of life, it may very well be the most important group of 60,000 people in the country.

It would seem ungracious if we failed to pause as the FORUM reaches this new circulation milestone and thank those whose loyal interest in this magazine continues to remind us that ours is not a casual journalistic assignment.

As proof of the ardour with which we embrace this task, we take you behind the pages of this "Work In Progress" issue. As usual, there's even more than meets the eye.

Typical of the perils risked is the saga of photographer Ben Schnall. Starting from New York to photograph the Byrne story in Baltimore, Schnall was caught in a snowstorm swooping up the coast, beat a quick retreat. On the next try several days later, he set out at 2 a.m. by auto, again retreated after running into another storm, passing fifteen wrecks in 20 miles.

Bloody but unbowed, Schnall retreated, and after parking his car, grabbed a Penn Station train to Baltimore. Trudging wearily through that city's chill morning air, he found the model house conspicuously devoid of furniture, since the store which was to furnish this important item had quietly burned down the night before. But if you'll turn to pages 82-87 you can see that Schnall got his pictures. H.M.

* Designed by FORUM subscriber Henry Dreyfuss (945-AHH-802085).

YES KENCORK IS BACK AGAIN

—the finest floor and wall tile

—modern since 1899

—now further improved by war-time research*

available without special order in
6"x6" 6"x12"
12"x12"
random shades
5/16" thick



IN LIVING ROOMS
for sheer beauty—
distinction—quiet

* Because of our experience making cork cartridge plugs for the Navy, Kencork is now made so micromatically accurate *it can be installed without machine sanding on the job.* The tiles are coated with a heated wax at the factory—can be installed on any smooth sub-floor in one fast, clean operation and is then ready for use.



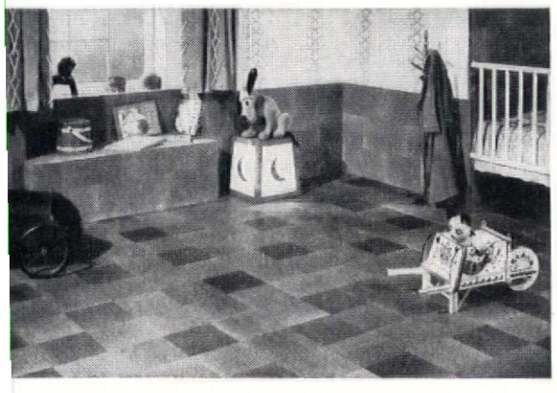
IN BEDROOMS
for loveliness—softness
and dryness—quiet



IN BATHROOMS
for luxury underfoot—dry
—soft—warm—sanitary

Since 1899 you have seen Kencork glorify the most important rooms in the country's most important buildings —from The White House to Rockefeller Center—

in OFFICES
COURT ROOMS
MUSEUMS
LUXURY SHOPS
LIBRARIES and FINE HOMES



IN NURSERIES
for practicality—quieting—a "cushion" against falls—moistureproof

KENCORK
the friendly floor
Trademark Reg.

—blends so beautifully everywhere
—is extra-kind underfoot
—and the world's quietest floor.

For information ask your flooring contractor or consult your nearest Kennedy office.

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58 E. Washington St., Chicago 6, Ill.
Bona Allen Bldg., Atlanta 3, Ga.
452 Statler Bldg., Boston 16, Mass.
614 Olympia Rd., Pittsburgh 11, Pa.
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CORNING ANNOUNCES...

TYPICAL *ALBA-LITE* AND *MONA-LITE* FIXTURE APPLICATIONS

Suspended or Surface Mounted



ALBA-LITE panels for direct lighting.

MONA-LITE panels for semi-indirect lighting (suspended fixtures).



MONA-LITE side panels and baffle.



ALBA-LITE panel for direct lighting.

MONA-LITE panel for semi-indirect lighting (suspended fixtures).



ALBA-LITE bottom panel and MONA-LITE side panels for direct lighting (URC type fixtures).

MONA-LITE bottom and side panels for semi-indirect lighting (suspended fixtures).

Flush and Semi-Flush Mounted



ALBA-LITE panel for ceiling mounted fixtures.

MONA-LITE panel for wall mounted fixtures.



ALBA-LITE bottom panels and MONA-LITE side panels.

SEND FOR *Free Sample*

CORNING GLASS WORKS
Dept. AF 4, Corning, N. Y.

Please send me a free sample of "MONA-LITE."

NAME_____

COMPANY_____

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CITY_____ STATE_____

··balanced lighting

with ALBA-LITE

HIGH TRANSMISSION
LOW REFLECTION

and now...
CORNING'S NEW LIGHTING GLASSWARE

MONA-LITE

LOW TRANSMISSION
HIGH REFLECTION

MONA-LITE Features: A dense opal glass in rolled sheet form . . . available flat or bent to specifications . . . fluted pattern on one side, other side smooth . . . diffusion secured through composition of the glass rather than through surface treatment . . . will not discolor . . . very low surface brightness.

CORNING GLASS WORKS
TECHNICAL PRODUCTS DIVISION
CORNING, NEW YORK

LIGHTINGWARE OPTICAL GLASS LABORATORY GLASSWARE
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CORNING means research in GLASS

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"CORNING" AND "ALBA" ARE REGISTERED TRADE-MARKS AND INDICATE MANUFACTURE BY CORNING GLASS WORKS, CORNING, N.Y.

EVIDENCE of QUALITY



Proven by more than a decade of consumer acceptance and guaranteed performance!

When you specify a BAR-BROOK BREEZEBUILDER Attic Fan for the homes you build, you're specifying a quality cooling appliance. For fifteen years the name BAR-BROOK has meant leadership in dependable cooling appliances, and the BREEZEBUILDER trade-mark on a fan is the assurance of dependable, inexpensive cooling in any home, old or new.

BREEZEBUILDERS come in four sizes—there's one to fit any house you plan. Write for additional information about specifications and installation.

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BAR-BROOK BREEZEBUILDER

FORUM

Behind the scenes with FORUM contributors



Frederick H. Ecker, the power behind Metropolitan Life's gargantuan housing program, is a prime example of the old American success story. Starting with Metropolitan as office boy, he rose to become its president and later Board Chairman. Stuyvesant Town, (p. 74) can be counted another lucrative triumph for Ecker's public conscience.



Bliss Moore, Jr., heads a firm which might be mistaken for the University of Washington Alumni Association. He, his former partner Robert Massar and three associates all studied architecture there, all were elected to Tau Sigma Delta. Their aim: to design for the Northwest's climate and customs. One result: Bellevue Shopping Center (p. 76).



Mario Corbett, who designed the "glass house" (p. 79), got early training in his father's drafting room, finished at the California School of Fine Arts. After a European travel scholarship, he opened his own San Francisco office in 1932, specializing in homes with a strong, regional character.





Victor Gruen and Elsie Krummeck are the famous husband-wife team which has earned an outstanding reputation specializing in retail shop design. They cover the west coast with offices in both Hollywood and San Francisco, have recently completed the Wynn furniture store (p. 88), are currently working on a California branch of R. H. Macy's.



John E. Byrne, whose construction company is putting up the 1,200 house development in Baltimore (p. 82), started his career as a cattle buyer in Texas and South America. Not until the Florida boom of 1923 did his eye light on the building business, but since that time he has constructed 7,500 dwelling units, developed a new steel framing method.





William Ganster and Arthur Hennighausen established their thriving practice ten years ago in Waukegan, Illinois, smack in the middle of the brisk suburban building area which stretches from Chicago along the rim of Lake Michigan. Since that time they have signed many a community landmark like the handsome high school (p. 90).





Ralph S. Twitchell who, with associate **Paul Rudolph,** designed the Sarasota beach house (p. 92), has practised from Maine to the Gulf of Mexico. His belief in regional architecture has brought forth such extremes as quaint timbered cottages for Connecticut, plate-glass goldfish bowls for Florida beaches.





The well-known New York firm of **Kahn & Jacobs** takes credit for Manhattan's first completely air-conditioned office building (p. 94). Both topped a Columbia University degree with Parisian polish (Jacobs in Le Corbusier's office) and, since joining hands in 1940, have produced an array of factories, commercial buildings, hospitals and housing.



Pietro Belluschi, architect for the Equitable Savings & Loan building in Portland (p. 98), is responsible for some of the most distinguished buildings in the Pacific Northwest. Born in Ancona, Italy in 1899, he received his doctor's degree in architectural engineering from the University of Rome, came to Cornell University in 1923.

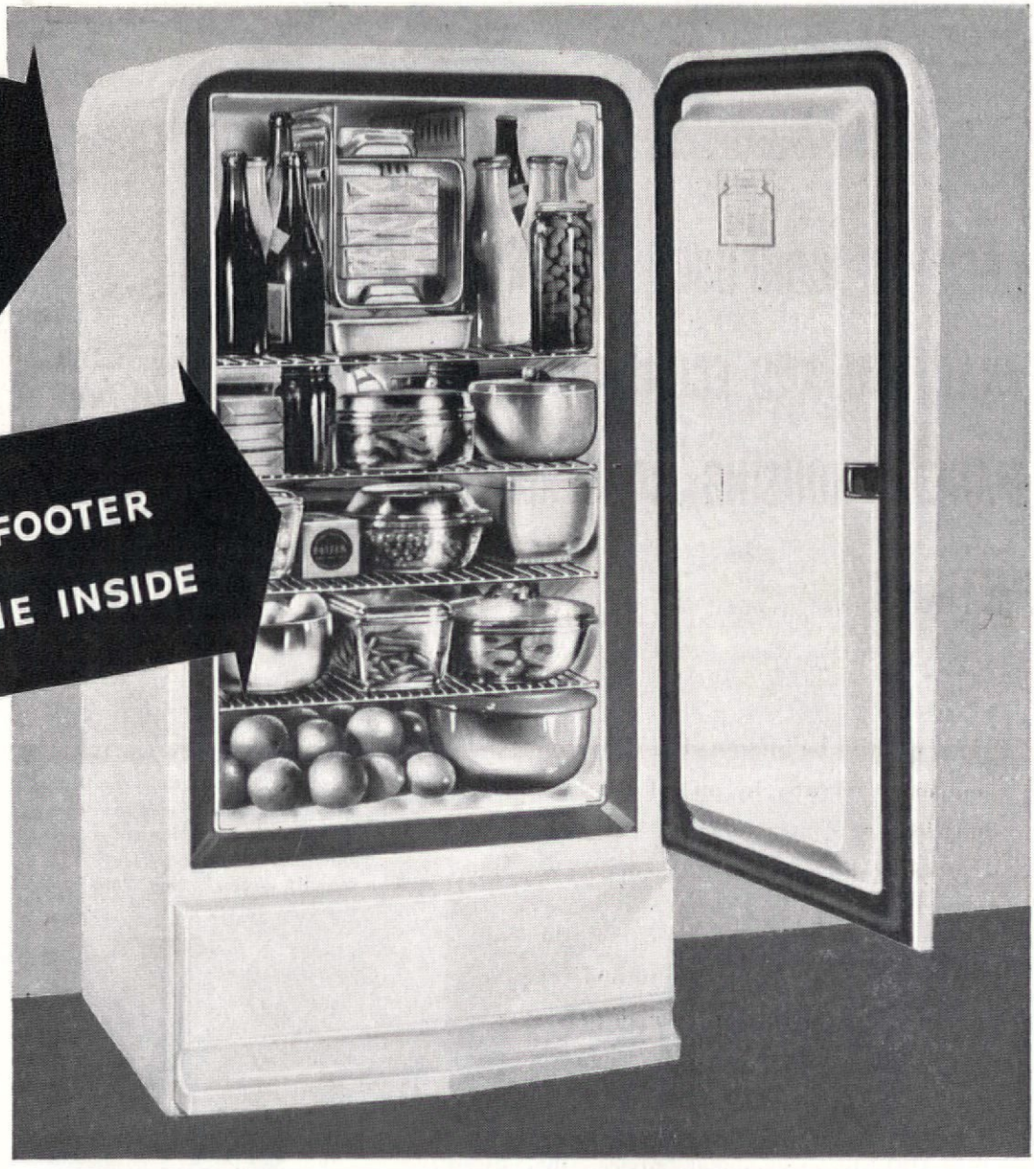


George Fred Keck, architect with his brother William of the Lake Michigan house (p. 102), dates his out-and-out modernism from 1926 when he opened his Chicago office. Specializing in single family dwellings, he is best known for his solar designs, but considers sociological and psychological factors of equal importance with mechanical tricks.

Here it is: *Frigidaire's* New Apartment Model

A 4 FOOTER ON THE OUTSIDE

A 6 FOOTER ON THE INSIDE



Yes, it's true! This new Frigidaire Apartment Refrigerator has been engineered from the ground up to give generous storage space in limited kitchen area. It provides *six full* cubic feet of storage. Yet it requires no more floor space—*and is less than two inches higher*—than conventional four-cubic-foot refrigerators.

For architects, builders, and apartment house owners and managers, this compact Frigidaire opens up many new possibilities in planning and equipping small kitchens.

Check *all* these advantages of this newest Frigidaire Refrigerator:

Frozen storage capacity for 15 lbs. of frozen foods. *Two* fast-freezing shelves.

Quickube Trays for 4 lbs. of ice—28 cubes. Trigger-quick ice release.

Aluminum, unbreakable cold-storage tray for meat, extra ice cubes; or for defrosting.

Flat top—to serve as an extra kitchen shelf.

Famous Meter-Miser! Simplest refrigerating mechanism ever built: compressor has two simple parts that move; uses less current than ordinary light bulb. Permanently sealed; requires no oiling or other attention. 5-Year Protection Plan.

Plus—One-piece all-steel cabinet; durable Dulux finish; porcelain-on-steel food compartment, with acid-resisting floor; rust-resisting shelves; Cold-Control; many other advantages!

DIMENSIONS: Height, 51 11/16"; width, 24 1/2", including hinges; depth, 26 3/4", including hardware and ventilating space in rear.

CAPACITY: 6.0 cu. ft. storage; 11.6 sq. ft. shelf space (NEMA standards).

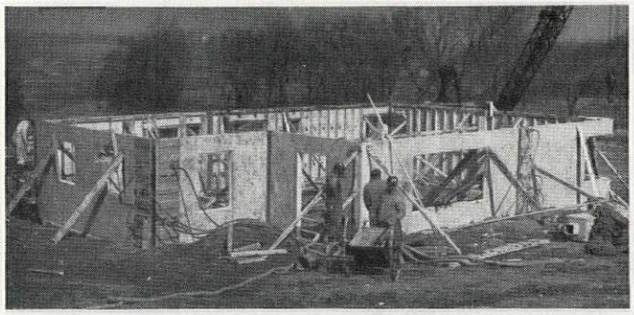
Write to Frigidaire Division, General Motors Corporation, Dayton, Ohio (or Leaside, Ontario) for address of nearest district office.

You're twice as sure with two great names

Frigidaire *made only by* ***General Motors***

REFRIGERATORS • ELECTRIC RANGES • WATER HEATERS • HOME FREEZERS • KITCHEN CABINETS
AUTOMATIC WASHERS • COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

(Continued from p. 54)



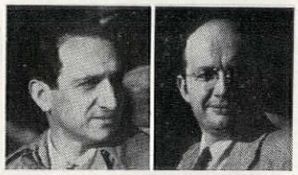
ARE YOU CONFUSED REGARDING PRACTICAL AND ECONOMICAL PERMANENT HOUSING CONSTRUCTION METHODS?

If so, you will be interested in the recommendation made recently by one of the largest combinations of contractors and engineers in the U. S. A. to a Government Agency. They state:

"Our investigations disclose that the *only process* we have been able to find for practical economical construction of precast concrete, in connection with Housing on———, is the *Vacuum Concrete Process.*"

WE OFFER professional advice, specialized equipment, and field supervision for large scale housing and apartment projects where mass duplication can be achieved.

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Philadelphia 4, Pa.



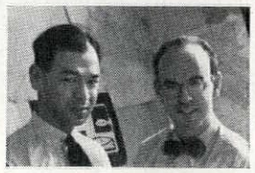
James Chiarelli and Paul Kirk, young Seattle architects, believe that the "enclosure of space" should assist the "economic, social, physical and spiritual development of the individual." Partners since 1944, they have put this philosophy into practice with a bevy of small public buildings like the Crown Hill clinic (p. 104).



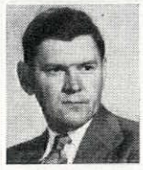
Kenneth Franzheim, architect, and **Raymond Loewy,** consultant, pooled their talents on the Foley department store (p. 106). Franzheim, a graduate of M.I.T., has practised for 25 years in the east and middlewest, with present headquarters in Houston. Although influenced by contemporary design, he decries what he terms "modernistic and freakish."



Igor B. Polevitsky, architect for the Golden Strand hotel (p. 110), has been practising architecture in the orange grove state since 1934. He set up shop there immediately upon graduation from the University of Pennsylvania, feels that the country and climate offer unusual possibilities for a new approach to architecture.



Worley K. Wong and John Garden Campbell began an unofficial partnership ten years ago when they spent after office hours pleasing themselves rather than their boss. Delayed by the war, they opened their own office only in 1946, have spent much of their time designing peacetime Quonset huts (p. 112) which they consider both handsome and practical.



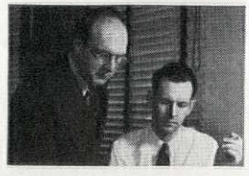
Arthur T. Brown, who designed the group of veterans' houses near Tucson (p. 115), has concentrated recently on lightweight, low-cost construction, conceiving such startling innovations as "solar masonry walls" and "revolving porches" to conquer the Arizona sun and heat. Before tackling the desert, he worked in Chicago.

Arthur Holden and Robert McLaughlin became partners in 1928, thus combining the traits of elegance and social conscience. "Society architect" McLaughlin and community planner Holden joined forces on low cost housing, recently designed New York Life's Princeton development (p. 114).

Ketchum, Gina & Sharp is the New York firm largely responsible for bringing plate glass to 5th Avenue. Their open front design technique is now invading smaller Main Streets with shops like the Union Fern store in Schenectady (p. 116).



Albert Kahn Associates, designers of the Bond Store's factory (p. 118), is one of the largest architectural and engineering firms in the world to specialize in industrial and commercial work. Six years ago the organization was expanded to include 25 new associates and in 1945 George H. Miels (left) succeeded the late Louis Kahn as president.



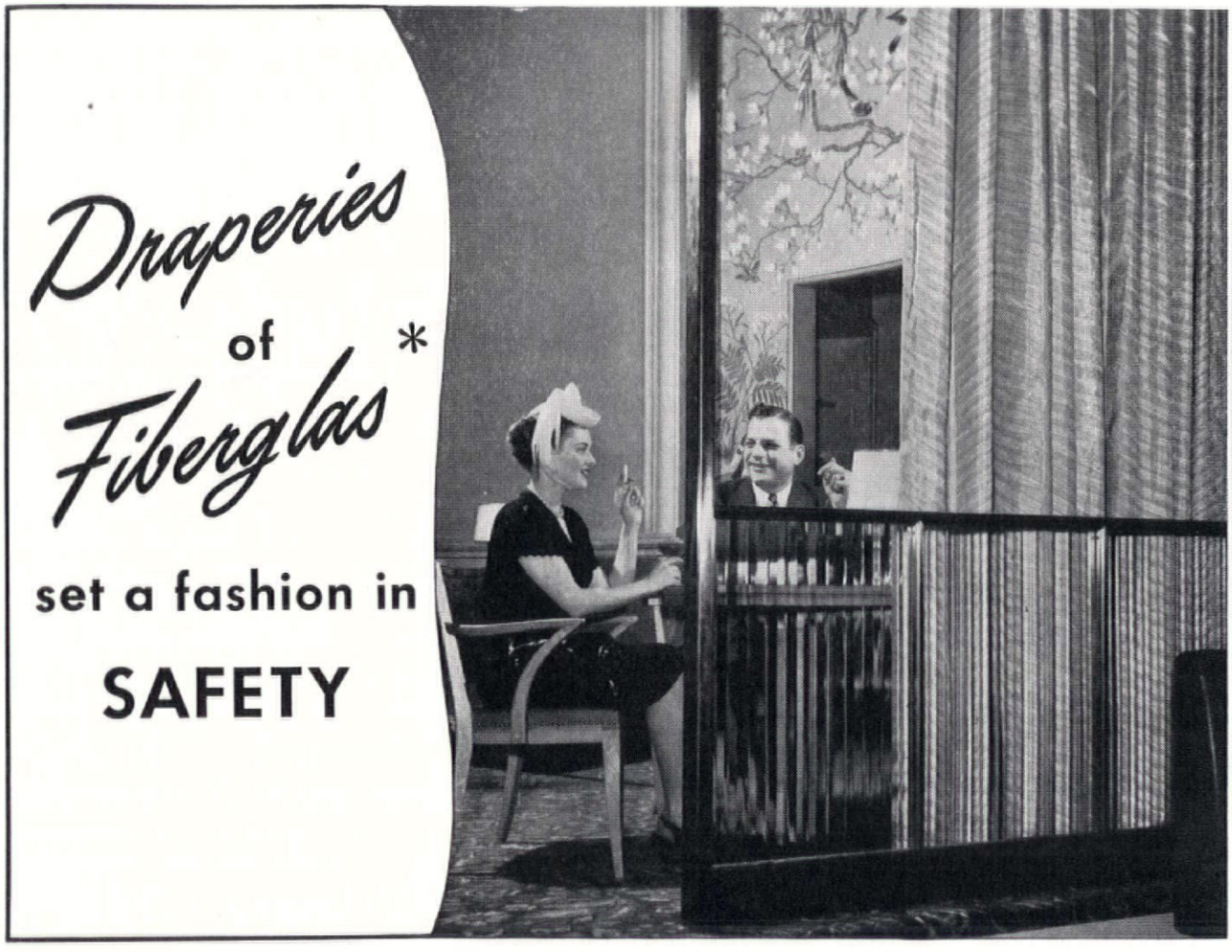
The Chicago firm of **Larry Perkins and Philip Will, Jr.,** designers of the Oak Meadows development (p. 120), was started in 1935 with E. Todd Wheeler, who recently resigned to do planning work for the state of Illinois. Both Perkins and Will are graduates of Cornell and the latter worked for several years with Shreve, Lamb & Harmon.



W. G. Parr and George W. Aderhold, who with **Joseph N. Boaz** designed Renberg's Department store in Tulsa (p. 124), maintain an Oklahoma City office, successor to the firm established by Parr's father. Boaz opened his Oklahoma office in 1945.



Huson Jackson and John Hancock Callender, designers of the Central Valley house (p. 126), comprise a smooth-working team with the supposedly irreconcilable backgrounds of Harvard and Yale. Jackson of Harvard formerly practised in Boston, Callender of Yale in New York, doing work on the Pierce Foundation's famous housing studies.



Fires can't start or spread in noncombustible decorative hangings

Serious fires usually result from the rapid spread of flames through materials that *can* burn.

Now, replace an inflammable material with one that *can't* burn—*and you eliminate a fire hazard.*

Decorative hangings woven from Fiberglas yarns can't burn. They're *glass.* They're *originally* and *permanently noncombustible.* Furthermore, in the midst of fire or searing hot blasts, these fabrics of Fiberglas will not contribute to the further depletion of oxygen, will not give off suffocating smoke and fumes.

In hundreds of places of public assembly from coast to coast—in hotels, restaurants, clubs, schools, hospitals, auditoriums—architects, decorators and owners are designing for safety, including in their plans these decorative, noncombustible fabrics of Fiberglas.

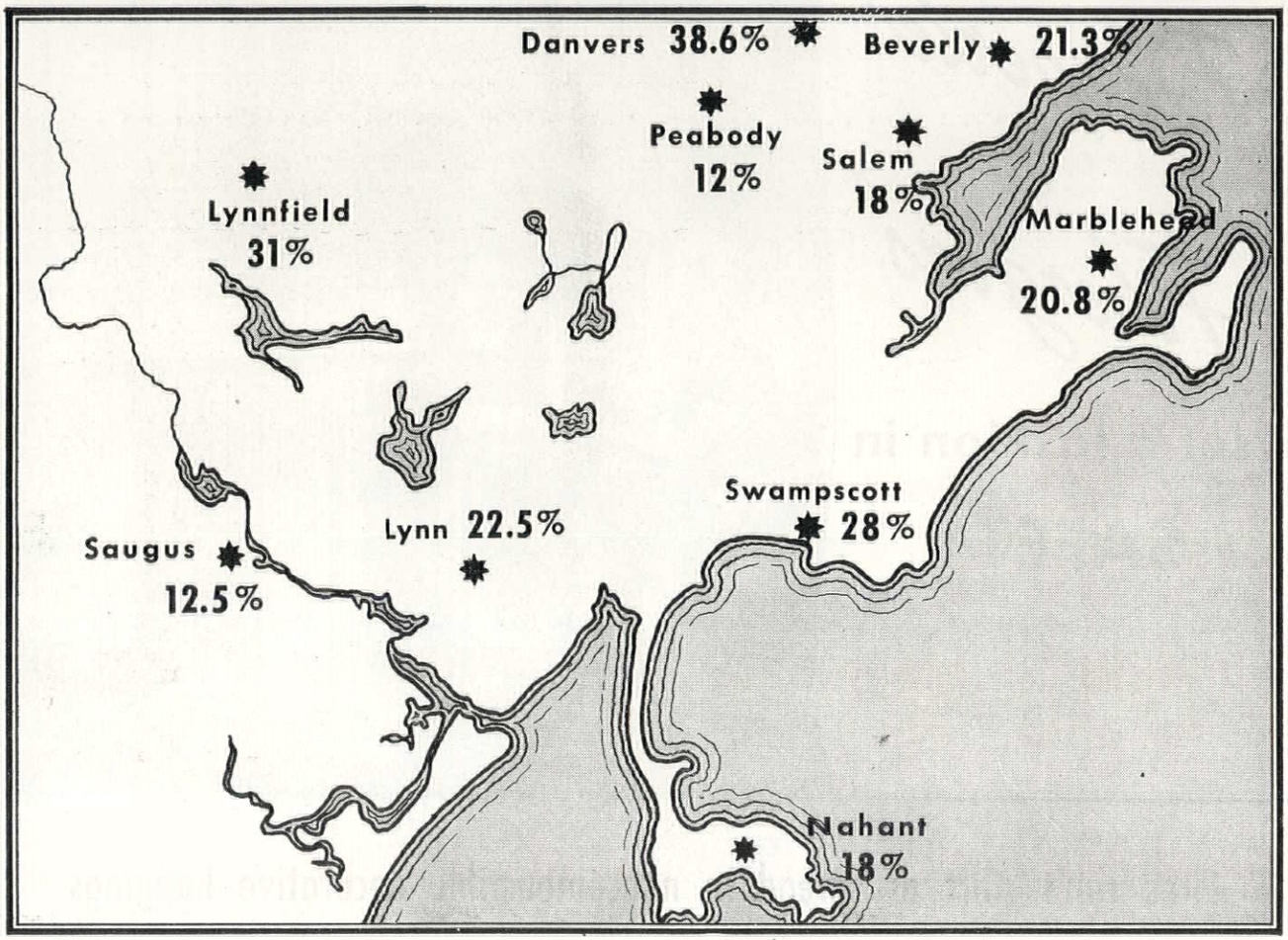
Many attractive weaves and colorful patterns are available—and expert fabric service shops located in principal cities are ready to fashion and hang the draperies you select for your decorative scheme . . . write Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, O.

In Canada: Fiberglas Canada Ltd., Toronto, Ontario.

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HOW DOES A LEADER GET THAT WAY?



Despite the fact that 85 other makes are represented in the Lynn area, 19.6% of all oil burners sold in that territory since 1934 have been Timken Silent Automatics . . . nearly one out of every five! In one community the figure is 38.6%.

LET'S take a look at automatic oil heating equipment. How did Timken Silent Automatic get 'way out in front in national sales and public acceptance?

The answer to *national* leadership is found in *local* leadership. A fine pattern of Timken local leadership is found in Lynn, Mass.

Booma-Breed, Inc., has been the Timken dealer in Lynn since 1934—and since that time, despite competition from 85 other makes, they have sold 19.6% of all oil burners sold in the area. This record has not been set by sleight-of-hand, but entirely by selling a quality product in a quality manner . . . to a buying public that is perhaps the most critical to be found anywhere in the country.

Nor is it an exceptional record. Scores of Timken dealers can point out their one-out-of-four, one-out-of-three and one-out-of-two ratios against odds as great if not greater.

What does this sales success mean to architects? First, here is proof of public acceptance of the highest type. Owners appreciate their Timkens—they spread the word of unfailing performance and fuel savings up to 25% and more.

Secondly, it's a record of cooperation between a quality manufacturer and a quality dealer organization. Timken dealers are trained and equipped to install Timken Products for highest operating efficiency, greatest user benefits and maximum satisfaction in general.

Your local Timken dealer can assist you on heating problems in the homes you are designing. May we suggest that you contact him *before* you specify automatic oil heating equipment?

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TIMKEN SILENT AUTOMATIC DIVISION
The Timken-Detroit Axle Company
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The Accepted TIMKEN HEAT Standard

William Lescaze Designs an Apartment Project...



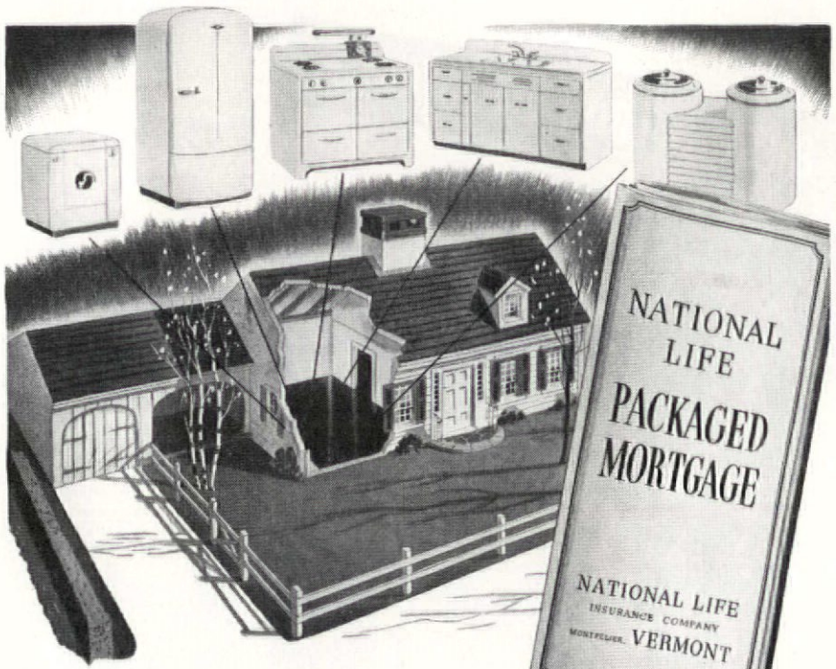
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"Metal windows help the architect achieve those dramatic effects so characteristic of contemporary design. Their versatility gives his pencil complete freedom of expression."



Architect
William Lescaze
in his
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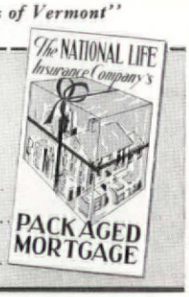
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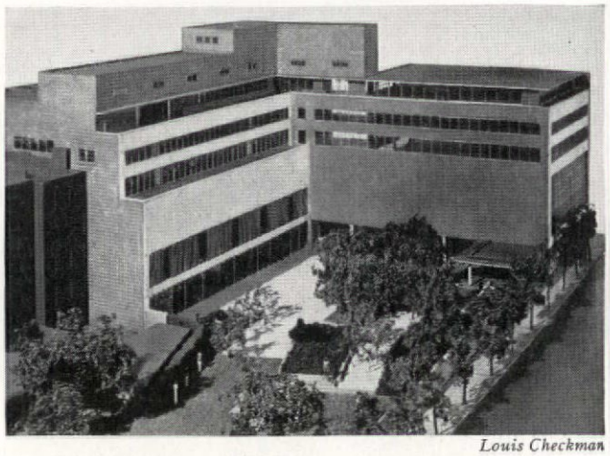
Please send me full information on your new, low-cost, all-inclusive plan for home-financing, and address of your nearest loan correspondent.

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ANNOUNCEMENTS



Louis Checkman

THE MUSEUM OF MODERN ART, New York City, announces plans for a new wing to double present exhibit facilities, which provide space for only 10 per cent of its collection. A $3,650,000 fund to cover construction costs and to expand the Museum's art and architecture program is now being raised. Philip Goodwin (who with Edward Stone was co-architect of the present building) designed the new wing.

A $15,000,000 NAVY ORDNANCE LABORATORY for electronic and aerodynamic research is already under way at White Oak, Md., (architects, Eggers & Higgins and Taylor & Fisher). The project will include about 50 buildings. In addition, plans for an adjacent suburban area, including single-family dwellings, shopping centers and apartment sites, are now being studied by the Maryland National Capitol Parks & Planning Commission.

A TWELVE-STORY OFFICE AND STORE BUILDING overlooking New York City's Central Park South is scheduled for spring construction by Frederick Brown, real estate firm. The air-conditioned structure, designed by Siegel & Green, architects and engineers, features continuous strip windows alternating with stone spandrels on its street face.

A NEW FACTORY AND OFFICE BUILDING will provide the Philadelphia Division of Yale & Towne Mfg. Co. with 700,000 sq. ft. on a single level for the manufacture of handling machinery. As planned by Ballinger Co., architects and engineers, the factory will also include offices for the firm's administrative, engineering and business departments. Turner Construction Co. will break ground in April.

EXHIBITS



Paul Parker

WALLPAPER DESIGNS by 19 artists were exhibited during March at America House, New York City, to stimulate in craftsmen, artists and decorators an awareness of the demands and possibilities of this interior design element. Suggestions for a variety of room types—from nursery through public restaurant—were included in the show. A brown-beige pattern of stylized unicorns and figures by Marion Rainey Voorhees (see above) presented one solution to the problem of finding wallpaper suitable for a modern room.

NEWARK OF THE FUTURE, a presentation of photographs, graphs, maps and models prepared *(Continued on page 62)*

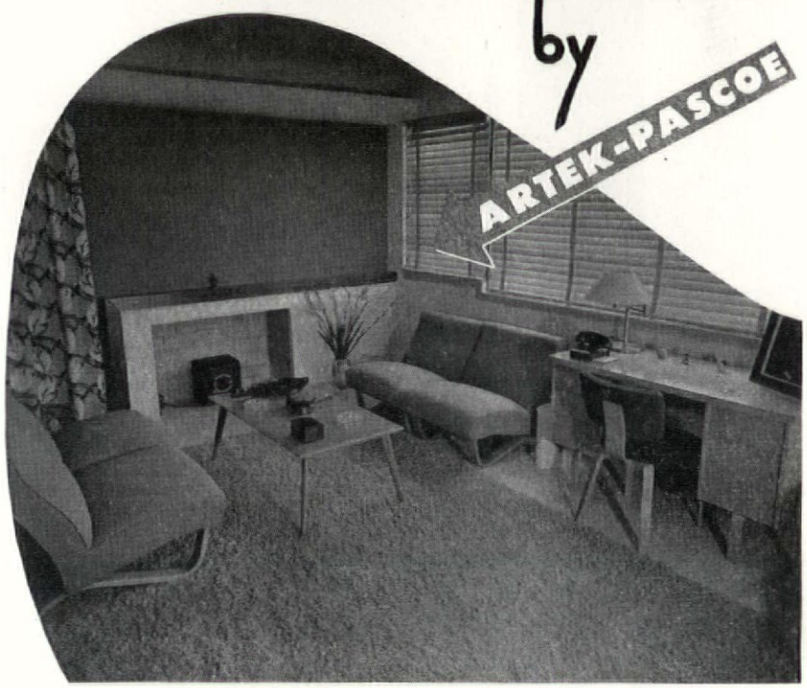


Ingenious use of compactly designed Case vitreous china plumbing fixtures turns "problem" space into a powder room—one of the most convenient rooms in a house and one valued highly by owners and buyers. With its 19″ overall height, the one-piece Case T/N* water closet offers the flexibility of placement required. This is a quiet free-standing fixture with positive *non-overflow*. The Cosmette Lavatory, in overall size as small as 20″x13½″, is a perfect companion to the T/N*. Wall hung or with chrome legs, it features an extra large basin, handy shelf space and concealed front overflow. Case plumbing fixtures are distributed nationally—see your Classified Telephone Directory or write to W. A. Case & Son Mfg. Co., Buffalo 3, N. Y. Founded 1853.

*PATENTED

Case *Vitreous China Plumbing Fixtures*

The Finishing Touch by ARTEK-PASCOE



Igor B. Polevitzky, Architect

No expense was spared in making the Golden Strand development one of the most luxurious projects of its type in the country. To complete this rich atmosphere ARTEK-PASCOE furniture was selected for the living rooms of these unusual villas.

More and more, discerning designers and decorators are selecting ARTEK-PASCOE to provide the finishing touch to projects where the furniture gives a first impression of the quality of their work.

Our contract department will be glad to work with you on your next project.

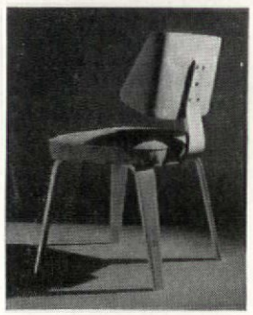
ARTEK-PASCOE
16 EAST 49th STREET • NEW YORK 17, N. Y.

ANNOUNCEMENTS

by the City Planning Board, will be shown in Newark Museum N. J. through the spring and summer.

THE GENIUS OF LOUIS SULLIVAN, a new exhibit of work by this great American architect-designer, will be presented at the Institute of Modern Art, Boston, Mass., from March 5th through April 27th.

DESIGN



A NEW LINE OF FURNITURE designed by Allen and Edwin Kramer exploits the greater-than-steel strength and flexibility of molded plywood. Pieces already in production include a dining and occasional chair, (see cut), dining table and "Ply-units." These last serve as bases for a variety of case pieces—bureaus, bookcases and beds. All furniture is laminated of birch and maple and is obtainable in natural, blackwood and mahogany as well as several colored lacquer finishes. John Stuart, Inc., New York, is manufacturer of the Kramer furniture which will soon be on sale throughout the country.

FELLOWSHIPS

THE KATE NEAL FINLEY MEMORIAL FELLOWSHIP offers $1,000 for a year's study in music, art or architectural design and history to graduate of institutions equal in standing to the University of Illinois College of Fine and Applied Arts. Information may be obtained from Dean Rexford Newcomb, Architecture Bldg., University of Illinois, Urbana, Ill.

THE JOHN AND ANNA LEE STACEY SCHOLARSHIP offers $1,500 toward a year of advanced study in conservative art (painting and drawing). Application blanks will be supplied by the Scholarship Committee of Otis Art Institute, 2401 Wilshire Blvd., Los Angeles 5, Calif.

APPOINTMENTS



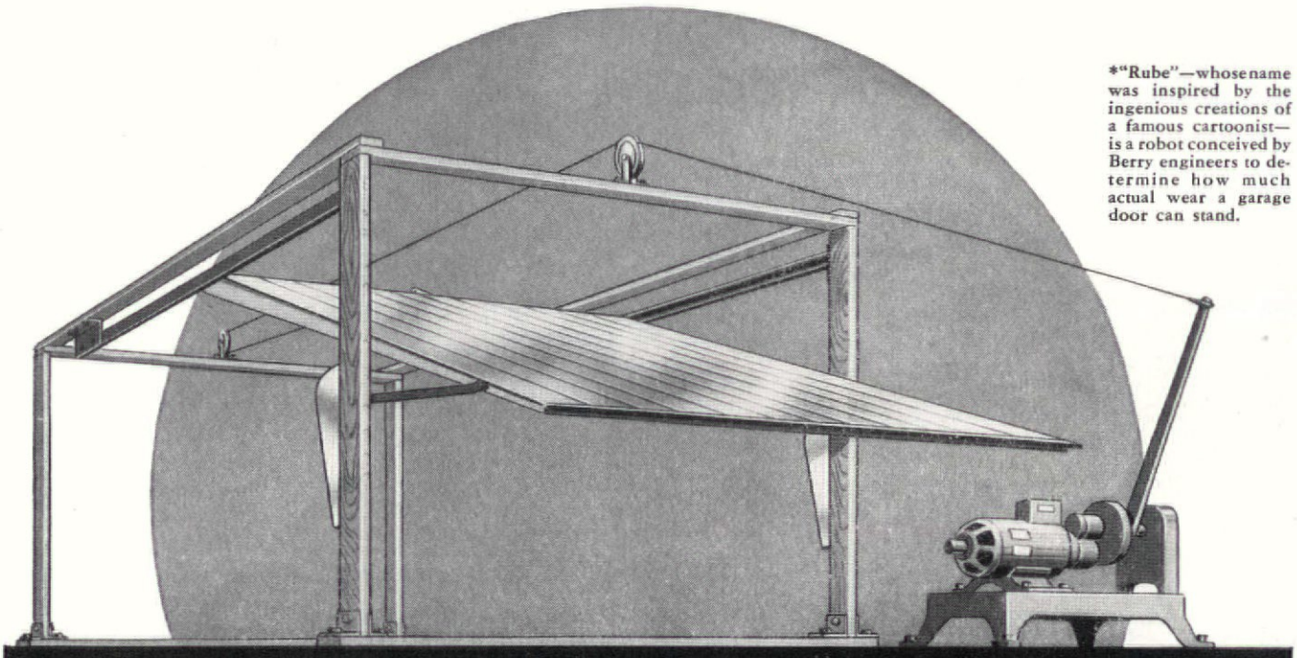
CHARLES SAWYER, head of the Worcester, Mass. Art Museum, has been appointed Director of the Yale University Division of Arts, and Dean of the Yale School of Fine Arts, and successor to Dean Everett Meeks who has held both these posts for the past 25 years. Mr. Sawyer, a Yale alumnus, was formerly Curator of the Addison Gallery of American Art at Andover, Mass. During the war he served in an Army civil affairs unit and also in the Office of Strategic Services.

MAJOR GENERAL PHILIP FLEMING, FWAdministrator, has been appointed General Chairman of the President's Conference on Fire Prevention to be held in Washington, D. C. from May 6-8.

H. C. TURNER, JR., is successor to Admiral Ben Moreell as president of Turner Construction Co., New York.

FRED GOTTSCHALK has been elected president of the newly formed Forest Products Research Society, Madison, Wisc., a group devoted to stimulating interest in all phases of wood products activity.

(Continued on page 64)



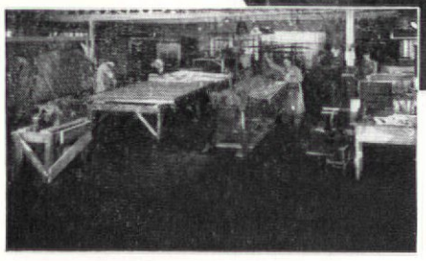
*"Rube"—whose name was inspired by the ingenious creations of a famous cartoonist—is a robot conceived by Berry engineers to determine how much actual wear a garage door can stand.

PRE-TESTED BY "RUBE"*

—to assure safe, trouble-free performance and lifetime durability

The lasting performance of all Berry Doors is predetermined by a series of exacting tests. Strength tests, salt spray and weathering tests are standard Berry research practice. So is the grueling "Rube" cycle test shown above, in which the door is opened and closed hour after hour, day after day—the equivalent of more than a lifetime of daily operation. Only after successfully meeting every test is it judged worthy of carrying the Berry name.





Two views of The Berry Door Engineering and Research Division.

Sealed Operating Unit Means Greater Safety

Because all operating mechanism is completely sealed in, the new Berry "Feather-lite" track type door, which tilts up and rolls inside the garage, is the safest door on the market. No exposed springs to break and fly or pinch childish fingers—no weights to cause uncontrolled opening or closing. It is sturdily built, yet so perfectly balanced and light in weight that a small child can safely open, walk under and close it without the slightest danger.



Better Design—Better Value—Lower Costs

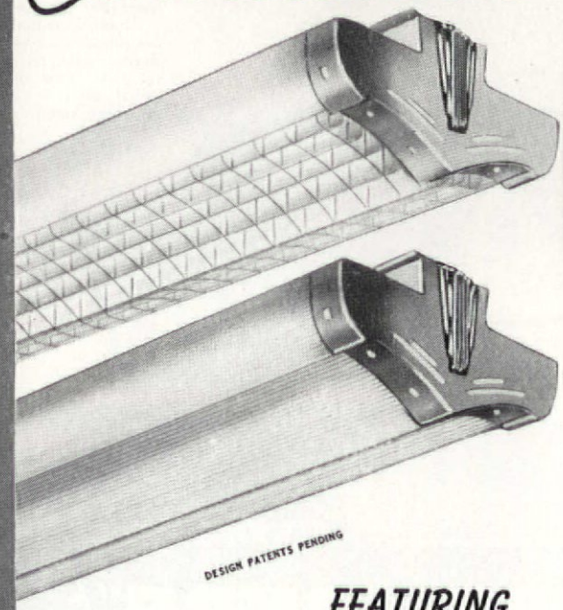
The position of the Berry Door as America's No. 1 Garage Door can be traced directly to the superior engineering and research facilities the Berry organization maintains. A large staff of practical and highly trained garage door engineers is constantly striving toward the development of better designed, more efficient and safer garage doors at lower cost.

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LPI, an important name in lighting, invites all architects, designers, and contractors to become fully acquainted with the Constellation, the bright star among fluorescent fixtures.

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DR. LEO BERANEK, formerly of Harvard University, is now Associate Professor of Communications Engineering at Massachusetts Institute of Technology.

LEON BROWN AIA has been named Assistant Professor of Architecture at Howard University, Washington, D. C.

NEW OFFICES

SAMUEL MARX, NOEL FLINT and CHARLES SCHONNE are now associated in the practice of architecture at 333 N. Michigan Ave., Chicago 1, Ill.

GEORGE L. HOWE and WM. DEWEY FOSTER, architects, have opened an office at 1636 Connecticut Ave., Washington 9, D. C.

JOHN FLOORE, architect, until recently with the AAF, is practicing at 815 American Fidelity Bldg., Fort Worth, Tex.

ALEXANDER COCHRAN, architect, has opened an office at 411 N. Charles St., Baltimore 10, Md.

WILLIAM DEKNATEL, architect, announces his return to general practice at 25 E. Jackson Blvd., Chicago 4, Ill.

JAMES ROSE has opened an office of landscape design and site planning at 624 Madison Ave., New York 22, N. Y.

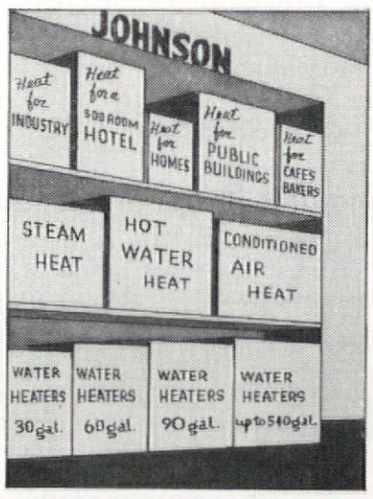
ELI RABINEAU, designer and architect, is located at 14 E. 39th St., New York 16, N. Y.

WILLIAM HERZOG and JOHN HENDERSON have formed an association for the practice of architecture, building and industrial design at 715 Ontario St., Oak Park, Ill.

WALTER BAERMANN, industrial designer, and MARC PETER, JR., architect, have opened an office of industrial design at 317 E. 51st St., New York 22, N. Y.

CHARLES OWSLEY AIA, JOHN SAMUELS AIA and JOHN WEHRELL AIA, associate, will practice architecture and related structural and mechanical engineering at 211 N. Champion St., Youngstown, Ohio. *(Continued on page 68)*

Johnson builds fine OIL BURNERS for every HEATING NEED!



"Packaged" heaters that come ready to install for use in automatic steam, hot-water and conditioned air systems. Replacement burners for every "conversion" job. Heavy-duty burners for hotels, hospitals, skyscrapers. Industrial burners. Automatic water heaters of every wanted capacity. Johnson builds them all! And builds them to produce more heat per dollar through years of hard usage. Whatever your problem may be ... when you need super-efficient heating equipment, it's wise to "look to Johnson" ... one of the oldest and most respected names in the Oil Burner field.

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UNITED STATES RUBBER COMPANY

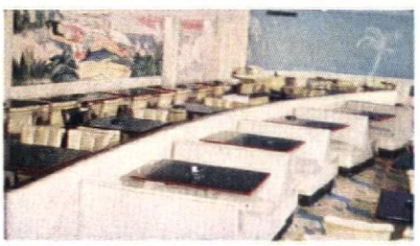
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Naugahyde won't fade from sun, soap and water, spills of alcohol, acids or alkali! Just wash away stains of dirt, perspiration, even ink. Beautiful, obedient Naugahyde smooths or drapes to taut perfection. Won't mar, chip, crack, peel or scuff. Can be made in special flameproof construction approved for use in New York, Boston and other major cities.



Design, Inc., of St. Louis, Mo., uses U. S. Plastic Naugahyde in this new room at the Roosevelt Hotel, Jacksonville, Florida.



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COATED FABRICS DIVISION
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Perfectly functional!

Perfectly beautiful!

Silver by Georg Jensen

The perfect Venetian Blind is made of

Flexalum

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• Yes, there's perfection in every line of this new window beauty . . . perfection you'll want to install in the homes and offices of your most particular clients. Made of a special aluminum alloy, Flexalum, one-third the weight of ordinary blinds, does not stretch tapes, permits easy installation. The graceful, precision-formed flexible slats close perfectly for complete privacy. Flexalum's satin-smooth finish blends with every color scheme, will not crack, chip, peel or rust. Sun or weather cannot affect the perfect beauty of Flexalum Venetian Blinds . . . they're made to last a lifetime.

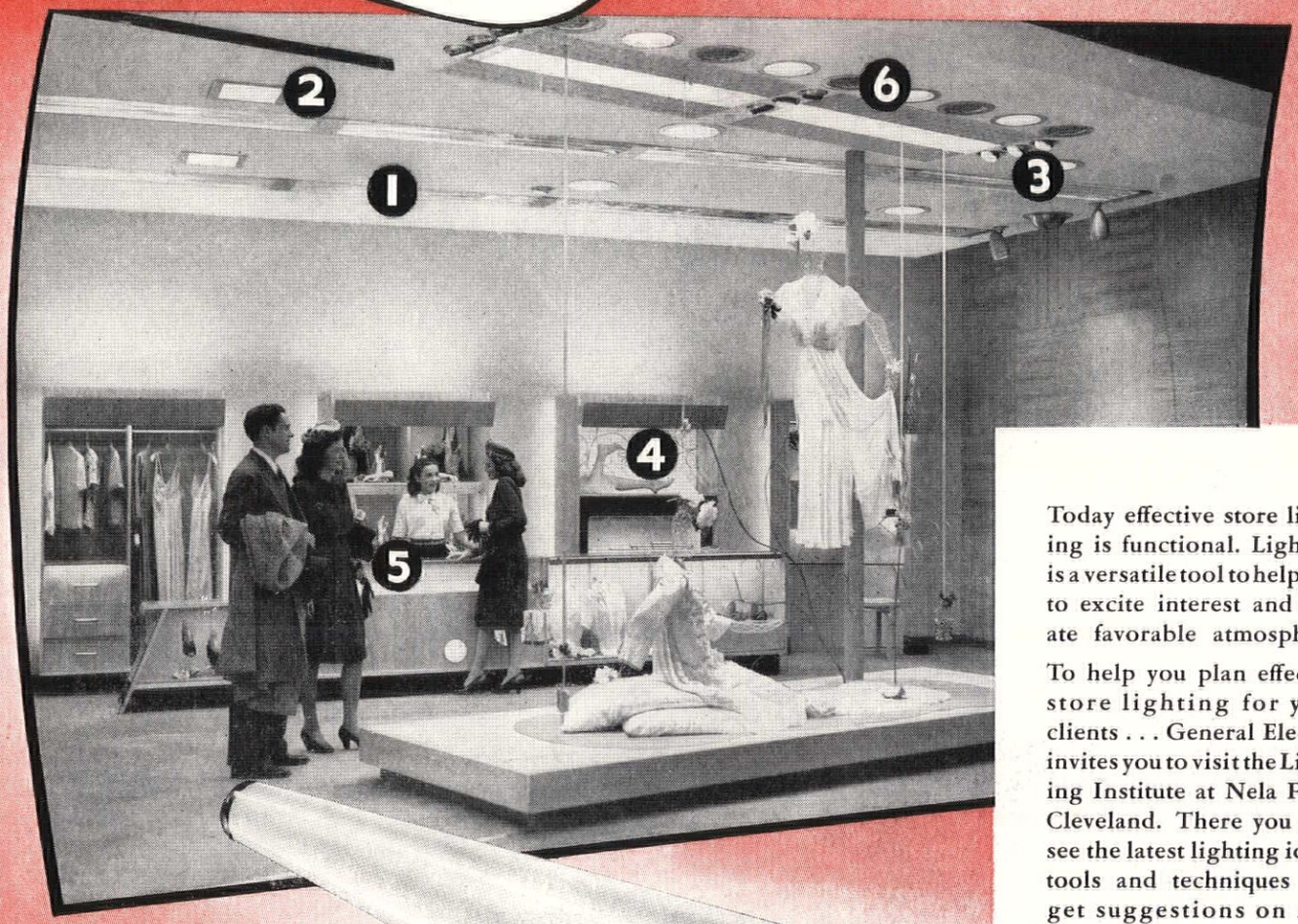
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6 Ways GE LAMPS Help Sell Merchandise

Here are six of many ways G-E Lamps are used in the women's wear store to aid in selling merchandise:

1. G-E Fluorescent Lamps give cool, even overall lighting to the store.
2. Filament Lamps in recessed fixtures may add the punch, snap and relief of direct lighting.
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4. Fluorescent lamps built into wall cases accentuate the merchandise.
5. Slimline fluorescent lamps fit modern display cases.
6. Filament lamps provide high brightness to dramatize featured items in window displays.



Today effective store lighting is functional. Lighting is a versatile tool to help sell, to excite interest and create favorable atmosphere.

To help you plan effective store lighting for your clients . . . General Electric invites you to visit the Lighting Institute at Nela Park, Cleveland. There you may see the latest lighting ideas, tools and techniques and get suggestions on new ways to use G-E Lamps.

When specifying lamps be sure you say "G-E Lamps", for they are constantly improved by research to make them . . .



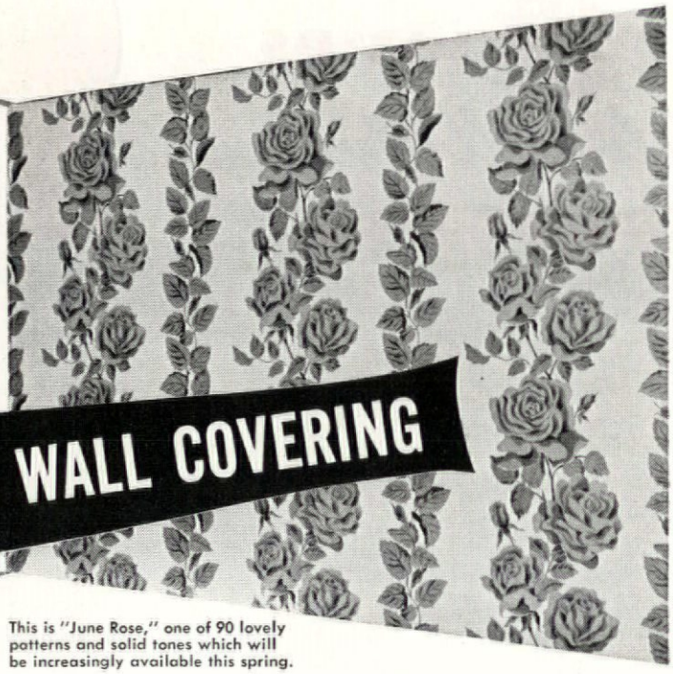
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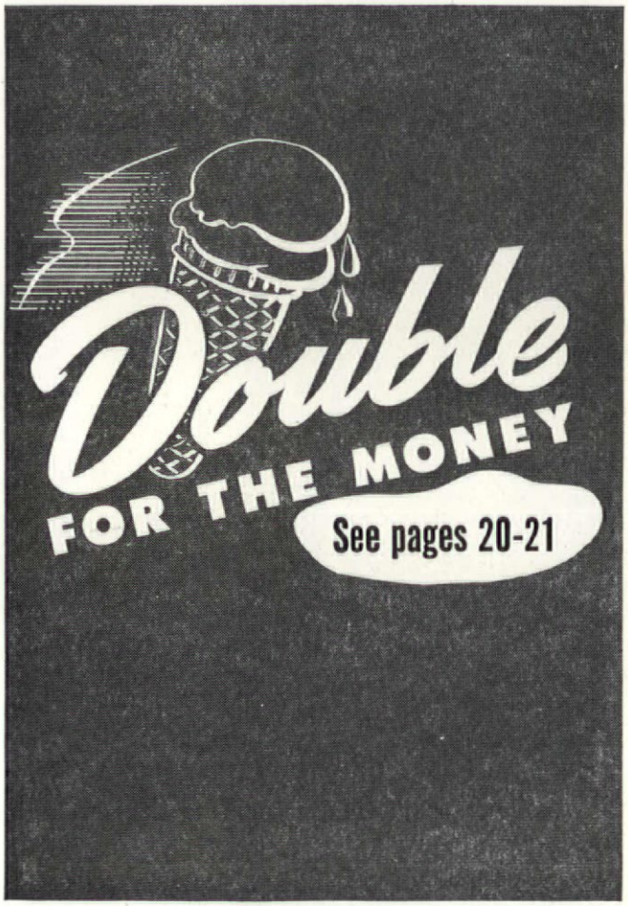
The one big difference between small homes of 1940 and the small homes of 1947 is in the area devoted to windows.

Homes like this two-bedroom job have become the rule, rather than the exception.

Here Andersen WINDOWALLS help achieve the feeling of size in the living room . . . and, as usual, they serve both as windows and as walls.

Andersen Horizontal Gliding Window Units combined in a corner installation. Home designed by St. Paul chapter, American Institute of Architects.

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JOHN WARE LINCOLN has reopened his office of architecture and product engineering at 161 Water St., Stonington, Conn.

JOSEPH HETTEL and WM. KENDALL ALBERT, architects, have formed a partnership at 501 Cooper St., Camden, N. J.

JAMES and EUGENE BEACHAM announce the formation of Beacham Associates, Architects, with offices in the Peoples National Bank Bldg., Greenville, S. C.

M. M. KONARSKI, architect, and F. W. STAFFORD, engineer, are associated at 844 W. Market St., Akron 3, Ohio.

VIRGIL ELSNER, JAN VAN TAMELEN and TIMOTHY WALSTON have opened an office of industrial design and model-making at 5653½ Hollywood Blvd., Los Angeles, Calif.

CHANGES OF ADDRESS

J. LLOYD CONRICH, architect, announces the removal of his office to 593 Market St., San Francisco 5, Calif.

WARREN DEDRICK AIA is now located at 132 W. Ocean Blvd., Long Beach 2, Calif.

HOEABIRD & ROOT, architects and engineers, have moved to 180 N. Wabash Ave., Chicago 1, Ill.

BENJAMIN COOK, will continue practice as general, industrial and mechanical engineering consultant at 1221 Baltimore Ave., Kansas City 6, Mo.

BURNHAM & HAMMOND, INC., architects and engineers, are now in offices at 53 W. Jackson Blvd., Chicago, Ill.

JENS RISOM DESIGN, INC., announces that its new address is 668 Fifth Ave., New York 19, N. Y.

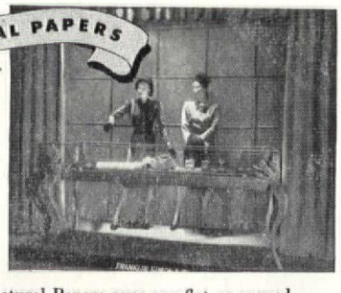
REQUEST FOR INFORMATION

THOMAS HART BENTON'S SKETCHES, DRAWINGS AND PAINTINGS (exclusive of lithographs) are being catalogued by Professor D. W. Laging, Department of Fine Arts, Michigan State College, E. Lansing, Mich. who would like to get in touch with owners of such Benton works.

Architects!

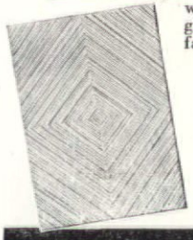
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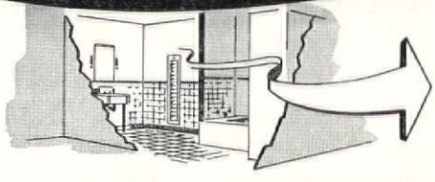
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SP-102 American Walnut, French Brown
SP-103 American Walnut, Hollywood Gray
SP-104 Quartered Walnut, Dark
SP-105 American Walnut, Natural Brown
SP-107 Quartered Walnut, Light
SP-109 Prima Vera
SP-110 Striped Mahogany

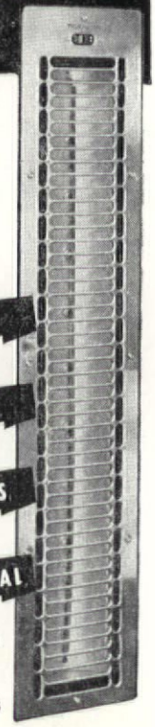


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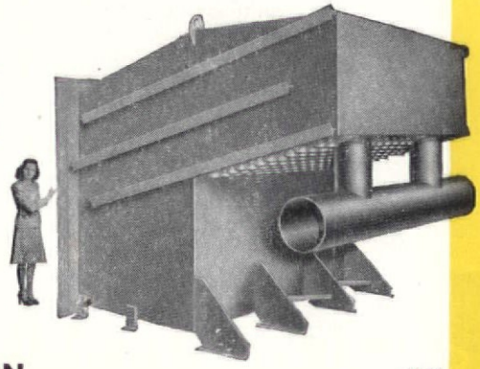
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FIRST... AND FOREMOST!

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Olsonite was the first SOLID PLASTIC seat. More than a million installations have since proved its right to leadership based on the three basic factors which govern the worth of any utilitarian product . . . original cost, appearance, and duration of trouble-free operation.

COSTS LESS Olsonite three-way leadership offers a top quality product at the *lowest* competitive price. Latest electronic manufacturing methods plus high volume production put Olsonite ahead of the field both in low unit cost and in speed of delivery.

LOOKS BETTER Olsonite leads in appearance. The solid plastic is highly buffed to a lasting, stainproof sheen. Olsonite will not chip or mar and resists acid or cigarette burns. Non-corrosive brass hinges are covered with Olsonite so that no metal is exposed.

LASTS LONGER Olsonite three-way leadership brings a seat which will outlast any other. Electronically molded under 150 tons of pressure into one seamless piece of plastic, it is indestructible in normal usage. There are no joints, seams or crevices to give way. Solid homogeneous plastic construction has no core to split or warp and eliminates any fire hazard because no inflammable material or finish is used.

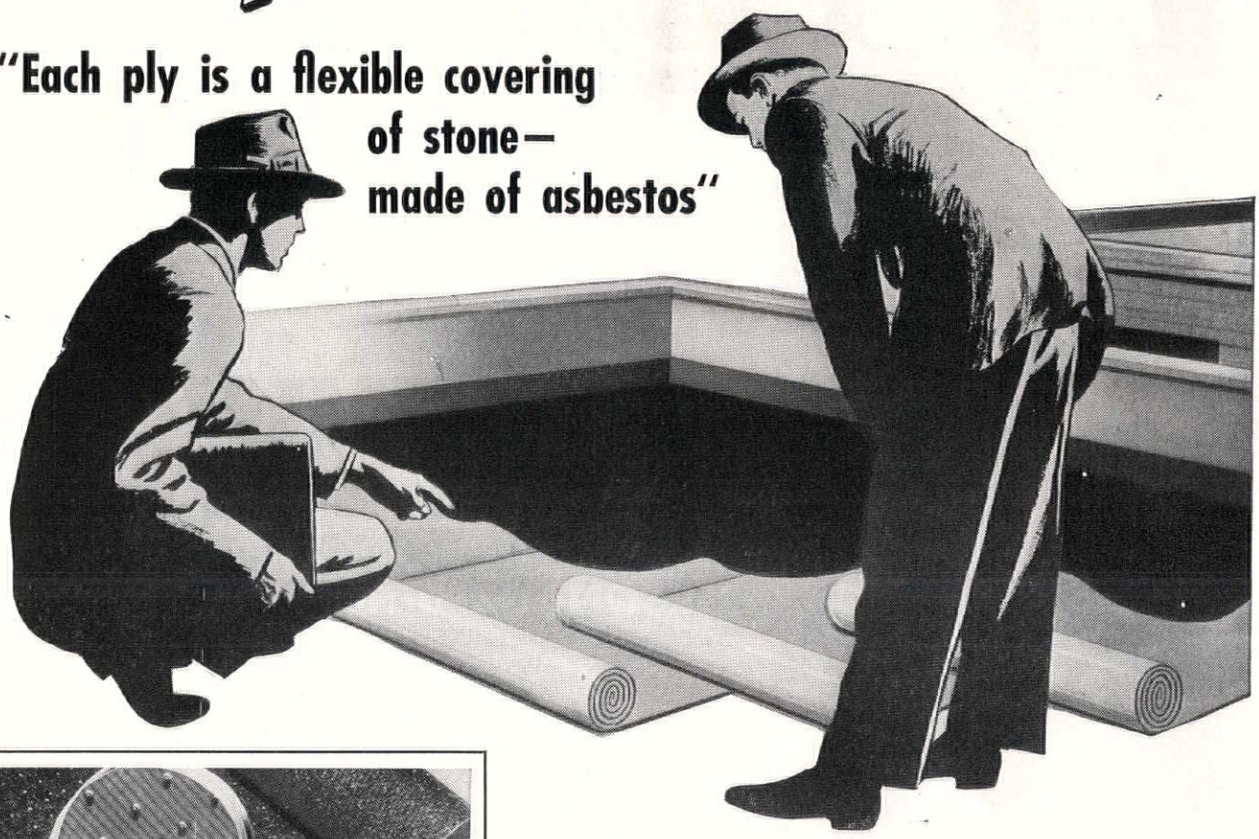
PROMPT DELIVERY Greatly expanded plant facilities are making possible accelerated delivery on all Olsonite models. Most orders for the model illustrated can be delivered immediately and even the largest orders can be shipped within 10 days. Write Dept. AF-4 for full details about the Olsonite line.

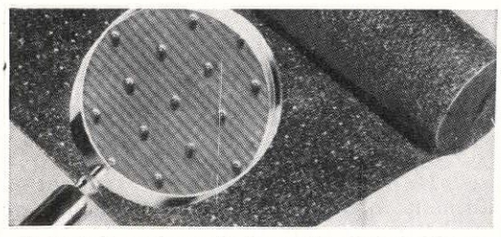
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For full and lasting protection . . .

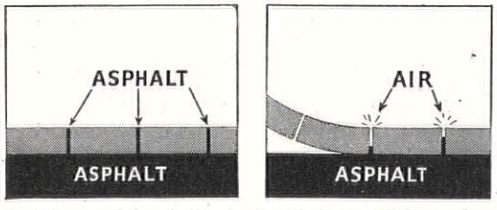
FLEXSTONE BUILT-UP ROOFS

"Each ply is a flexible covering of stone— made of asbestos"





Perforated to make application easier, eliminate blisters.



Millions of tiny holes in J-M Asbestos Felts make them easier to apply. The perforations act as minute "safety valves," allow trapped air to escape, prevent formation of blisters. J-M Felts are more flexible . . . lay smoother . . . conform better to irregular roof decks.

Fireproof, rotproof *asbestos felts* give Johns-Manville Flexstone Roofs that Rock-of-Gibraltar resistance to wear and weather.

That's why these built-up roofs offer the most enduring and reliable protection for your buildings. Won't dry out from the sun . . . need no periodic coating. They're *smooth-surfaced,* too—permitting fast and thorough roof drainage. Upkeep expense is minimized, as actual roof can be seen—any damage is easily found and repaired.

All Johns-Manville Flexstone Roofs are engineered to the particular requirements of your building—whether it's new construction or re-roofing. To insure skilled application, they are applied only by Johns-Manville Approved Roofers.

Three grades are available: Flexstone *Super "A",* Flexstone *Standard,* and Flexstone *Service*—each the finest that can be specified for its purpose. Write for our brochure BU-51A. Johns-Manville, Box 290, New York 16, N. Y.

Because of unprecedented demand, there may be times when we cannot make immediate delivery. Please anticipate your needs.

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Johns-Manville FLEXSTONE BUILT-UP ROOFS



15 OUT OF 16

NEW MANHATTAN APARTMENT BUILDINGS will have

HONEYWELL

PERSONALIZED HEATING CONTROL

IT'S pretty conclusive proof that a product has something important to offer when it gains such a degree of acceptance. And that's the record established by Honeywell Personalized Heating Control among the new apartment building construction projects now under way in Manhattan. Fifteen modern elevator-type structures to be P. H. C. equipped—15 out of 16!

Personalized Heating Controls give apartment dwellers the ultimate in heating comfort. With one or more Honeywell thermostats installed in every suite, each tenant is able to select his own temperature at all times. From an operating standpoint, P. H. C. systems are saving fuel at an average rate of 20%. That's a benefit property owners are quick to appreciate.

You can specify P. H. C. systems for existing buildings, too. By an ingenious method developed by Honeywell, installation is handled as simply as installing a telephone. Get the facts now about this newest system of heat control for apartment buildings—both large and small. Minneapolis-Honeywell Regulator Co., 2601 Fourth Ave. So., Minneapolis 8, Minnesota. Canadian Plant: Toronto 12, Ontario.

MINNEAPOLIS Honeywell

CONTROL SYSTEMS



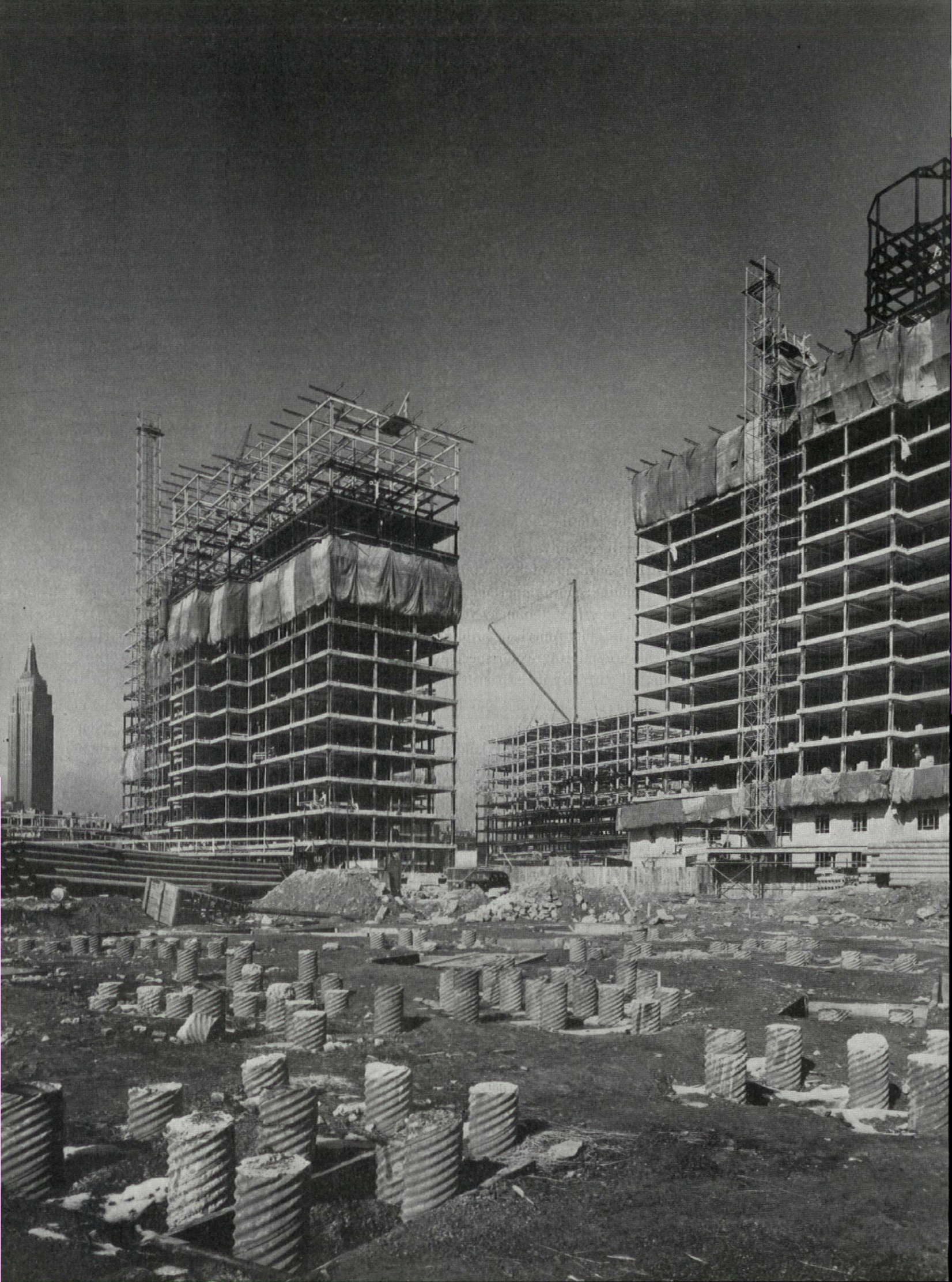
IT is quite the thing, nowadays, to say that the postwar dream world has vanished into mist. The stressed skins, electronic cookers, molded plastics and private helicopters, they say, have gone to a well-deserved limbo. Some of these prophets go even further: the wartime dreams of peace and plenty were hopelessly romantic, anyway. Back to the clapboard and shingle, back to the mortarboard and the hoe!

It will certainly take some years of peace to sift out the chaff of war. But FORUM, as a persistent advocate of better building, finds evidence aplenty that many wartime advances were genuine; more important, that these gains are far from lost. Prices may be too high, materials too short, too many veterans still without houses — stressed or otherwise. Yet the fact remains that American building is putting to good use many items of theory and practice which were only four-color speculation prior to and during the war years. The work in this issue, all currently under construction, affords many examples.

Large-scale planning and large-scale production, of the sort made familiar by emergency construction during the war, are being effectively used in two brand new, 1,200-house communities — one in Maryland (p. 82), the other in Illinois (p. 120). Both have shopping centers, but still another project in Seattle (p. 76) is the best demonstration of how fully recent experience in this new building type is being applied today. And the wartime daydreams of displaced designers are surely reflected in the Texas department store (p. 106), whose endless conveyors carry customers' packages to cars in an adjacent garage.

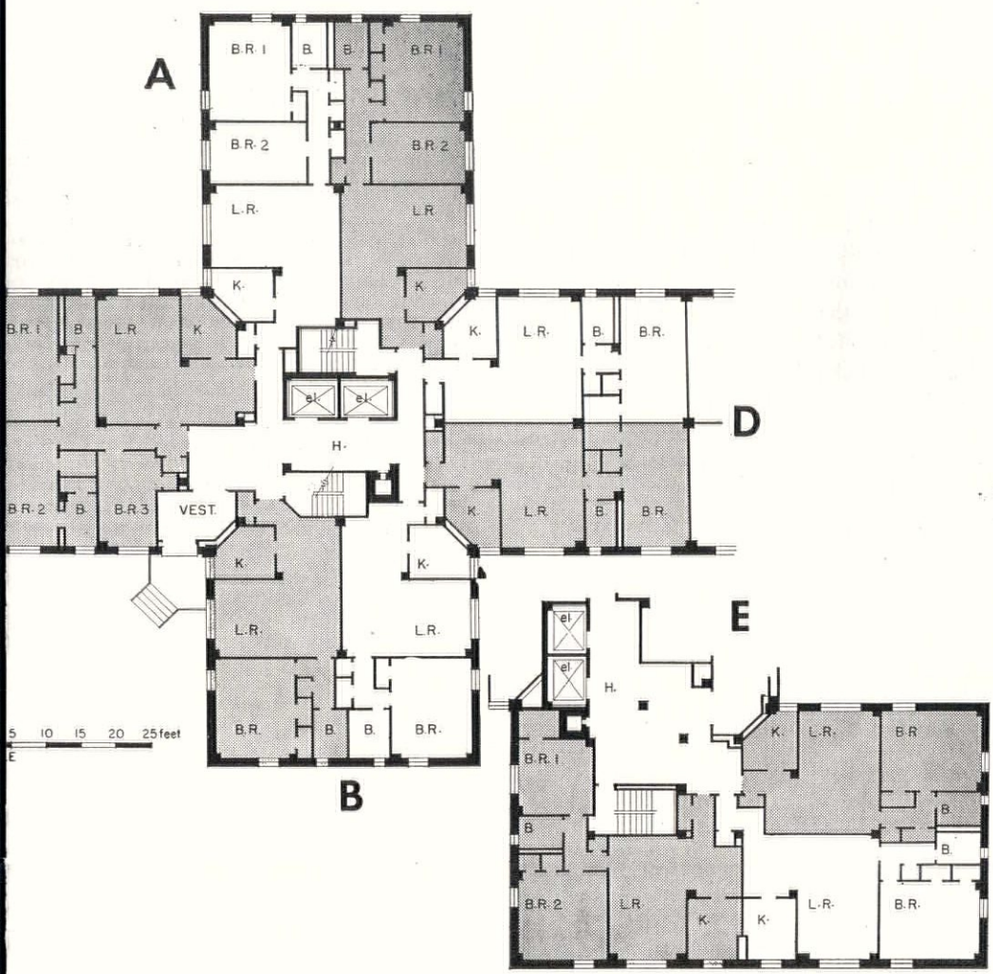
This issue boasts no electronic cookers (although, in cold fact, a model which can bake a pot of beans in 29 seconds can already be rented for $150.00 per month). But a twelve-story building in Portland (p. 98) is completely heated and cooled with reverse cycle refrigeration. Buildings are not yet stamped out of hydraulic presses — bing, bing, like soap dishes. But a new clinic in Seattle (p. 104) is using plastic astradomes from B-29's to real advantage as skylights. FORUM still finds a lot of good, old-fashioned brick and wood where once we might have envisioned magnesium. But the world is not standing entirely still when architects can design, and building departments accept, a multi-story building sheathed entirely in aluminum or a concrete frame with anything but modest cantilevers (p. 124).

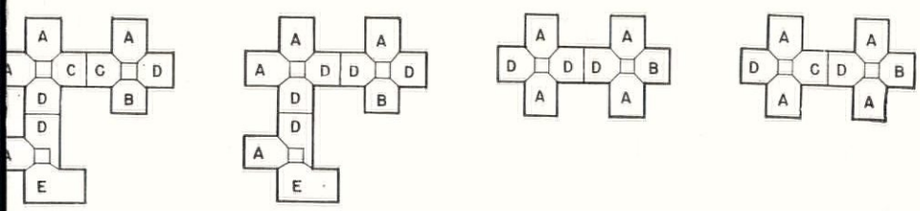
FORUM never predicted, and does not now pretend, that such developments will be found on every street corner. America is a big country with a great many corners. But if today's gap between promise and reality is to be filled, or even narrowed, it will not be by yesterday's methods and materials. It will be by such buildings as shown in this issue. They are the hard-headed efforts of serious designers, builders and owners, who have frankly and even eagerly borrowed from the postwar "dream world" because they could nowhere else find fully satisfactory solutions to their problems.



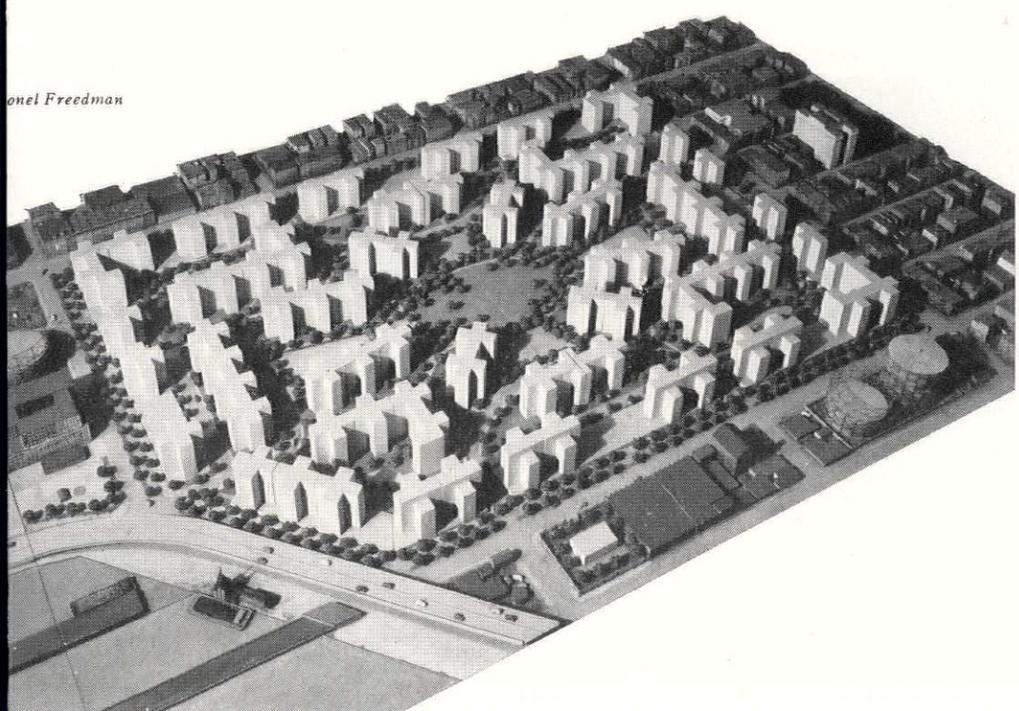
WORK IN PROGRESS!

STUYVESANT TOWN Metropolitan's newest housing giant is nearing completion despite material and labor shortages.





onel Freedman



BOARD OF DESIGN:
GILMORE D. CLARK, Chairman
IRWIN CLAVAN, Chief Architect
HENRY F. RICHARDSON
GEORGE GOVE
ANDREW J. EKEN

Steel girders now rising on the downtown side of the 75-acre plot stretching from 14th Street to 20th Street and from 1st Avenue to the East River in Manhattan's famed "gashouse district" mark the postwar conversion of another urban slum area into a planned residential community. First of Metropolitan Life Insurance Company's three new housing projects to get well under way,* much-heralded Stuyvesant Town is scheduled for initial occupancy this fall, when a few of the 35 buildings will be completed. Like Metropolitan's famous Parkchester, the new development is a housing colussus. Packed efficiently into eighteen blocks will be 8,759 apartments for approximately 24,000 persons, plus garages, shops, a three-acre park and ten playgrounds. The cost will be in the neighborhood of $50 million, bringing Metropolitan's investment in moderate rental housing to well over $200 million.

Apartments in the new project range from one to three bedrooms in size and from $46 to $77 in rent including gas and electricity. They are designed in a typical cross-plan which allows excellent ventilation and views in each apartment, a comparatively large amount of open space on the site and a staggered arrangement of buildings to relieve the usual monotony of such gigantic developments. By comparing the new development with surrounding blocks, its relatively large amount of open space becomes evident.

The project has not escaped criticism, however. No schools are provided for this population equal to that of a good-sized town. Another target is the high density—390 persons per acre—and the fact that the 25-year partial tax exemption amounts to more than the value of the land. But since the city and state government has set the controlling conditions, Metropolitan can hardly be blamed for acting accordingly.

* Others are Riverton Houses in Harlem and Manhattan's Peter Cooper Village.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—4 in. brick, 6 in. cinder back-up tile and air space, aluminum foil, plaster and paint. Columns—skeleton steel, Bethlehem Steel Co. ROOF—5-ply built-up, Koppers Co. SHEET METAL WORK—copper. INSULATION: Roofs—Temlock insulation, Armstrong Cork Co. WINDOWS: Sash—steel casement, Truscon Steel Corp. Glass—double strength, casement, Truscon Steel Corp. STAIRS—steel checkered plate. ELEVATORS—Westinghouse Electric & Manufacturing Co. FLOOR COVERINGS: Kitchens—linoleum, Congoleum-Nairn, Inc., Bathrooms—tile. Corridors—asphalt tile or terrazzo. HARDWARE—Seigel Co., Div. of Norwalk Lock Co. PLUMBING FIXTURES—Kohler Co. KITCHEN CABINETS—Berger Mfg. Co. HEATING—steam system. Convectors—C. A. Dunham Co.

WORK IN PROGRESS!

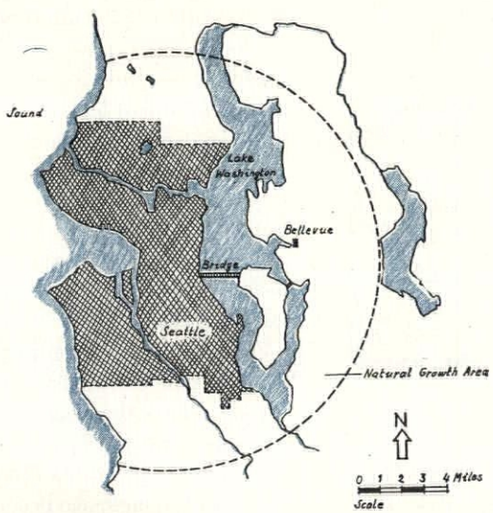
SHOPPING CENTER in Bellevue, Wash. is a smoothly designed expertly handled exercise in modern real estate improvement

MOORE & MASSAR, Architects
HAINSWORTH CONSTRUCTION CO., General Contractors

This new shopping center in a suburb of Seattle avoids many of the errors and includes many of the best features of prewar and wartime centers. Thus, it is located in a rapidly growing community whose existing retail outlets are woefully inadequate. It is large enough to be an independent economic unit; its nucleus is built around a suburban branch of a large metropolitan department store; it boasts 2 sq. ft. of parking space for each square foot of enclosed area; all its sidewalks are covered. But perhaps most significant of all is its unified architectural design. Many centers were studied by owner and architects before deciding against stylistic clichés in favor of a strictly contemporary approach. Bellevue Square's rental policy, according to Owner Kemper Freeman, is "the only realistic one for a project built on what was last year an apple orchard: percentage rentals throughout." Although he was swamped with applications for the 29 spaces in the first section of the Square, Freeman says he first made a careful balanced list of the goods and services it should offer. "Then we went out and found most of the tenants because we felt it was extremely important to pick the merchant best qualified and able to do the best job." Planning of each individual store thus benefitted by tenant participation from the very start.

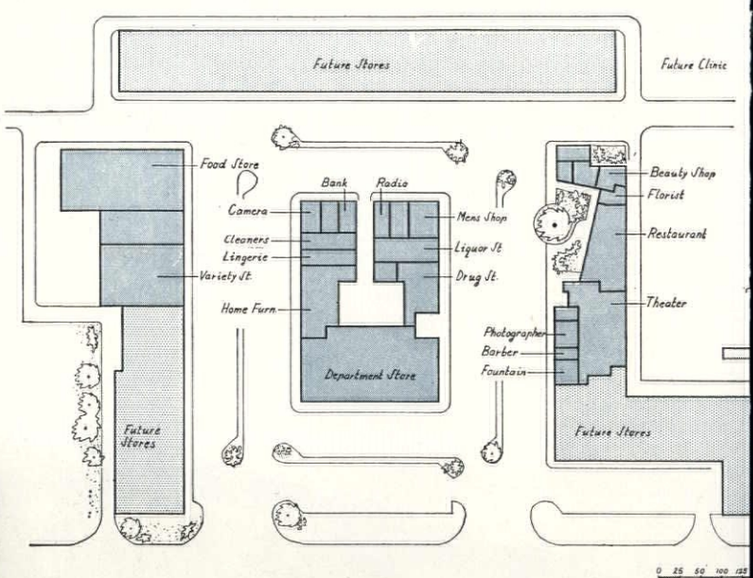
CONSTRUCTION OUTLINE

FOUNDATIONS — spread concrete, Diamon Cement Co. **STRUCTURE:** Exterior walls—8 16 in. concrete block, Graystone Products Co furred and plaster store fronts, glass, Pitts burgh Plate Glass Co.; Roman brick, Builde Brick Co.; cement asbestos board, Keasbey Mattison Co.; inside—2 x 4 in. studs, lath an plaster. Columns—steel pipe and H column Structural steel—wide lange I channels an angles, Columbia Steel Co. and Bethlehem Ste Co. Floors—concrete slab. Ceiling—wood joist lath and plaster. ROOF—steel trusses, woo joists with Acousti-Celotex, Celotex Corp., o wood bowstring trusses, wood joists, lath an plaster. **SHEET METAL WORK:** Flashing— Columbia Steel Co. Gutters—galvanized Iron **INSULATION**—Celotex Corp., Johns-Manvill and Eagle Pitcher Sales Co. **WINDOWS:** Sas —Steel, Fentron Steel Works. Glass—Pittsburg Plate Glass Co. **FLOOR COVERINGS**—asphal tile. **WALL COVERINGS**—plaster, plaste board, plywood and vertical grain cedar or fir.

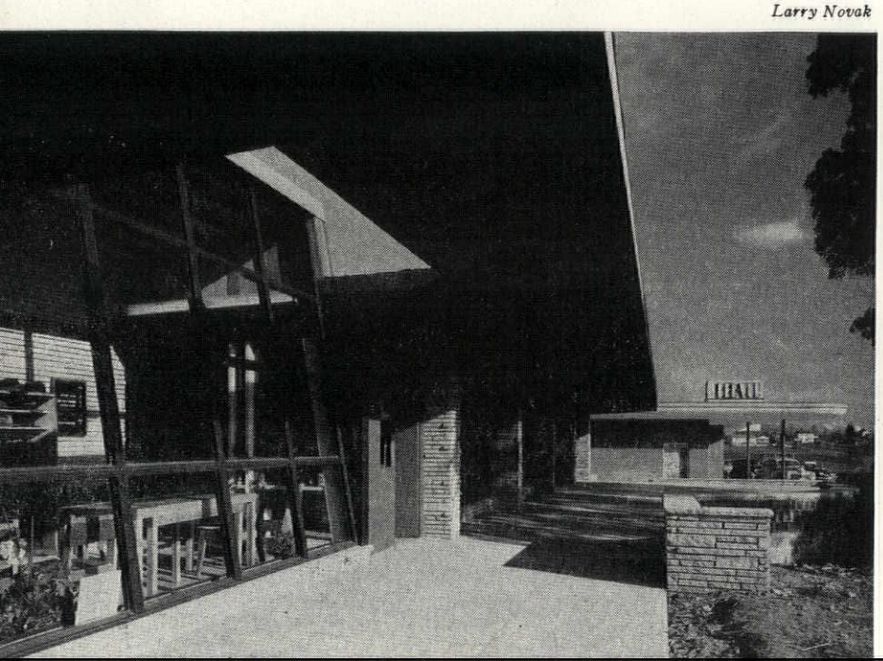


A FLOATING BRIDGE flung across Lake Washington in 1940 suddenly telescoped distance to Seattle, converted sleepy Bellevue from a repair base for the North Pacific Whaling Fleet into Seattle's fastest growing suburb. Population has doubled, commuters increased from 10 to 75%.

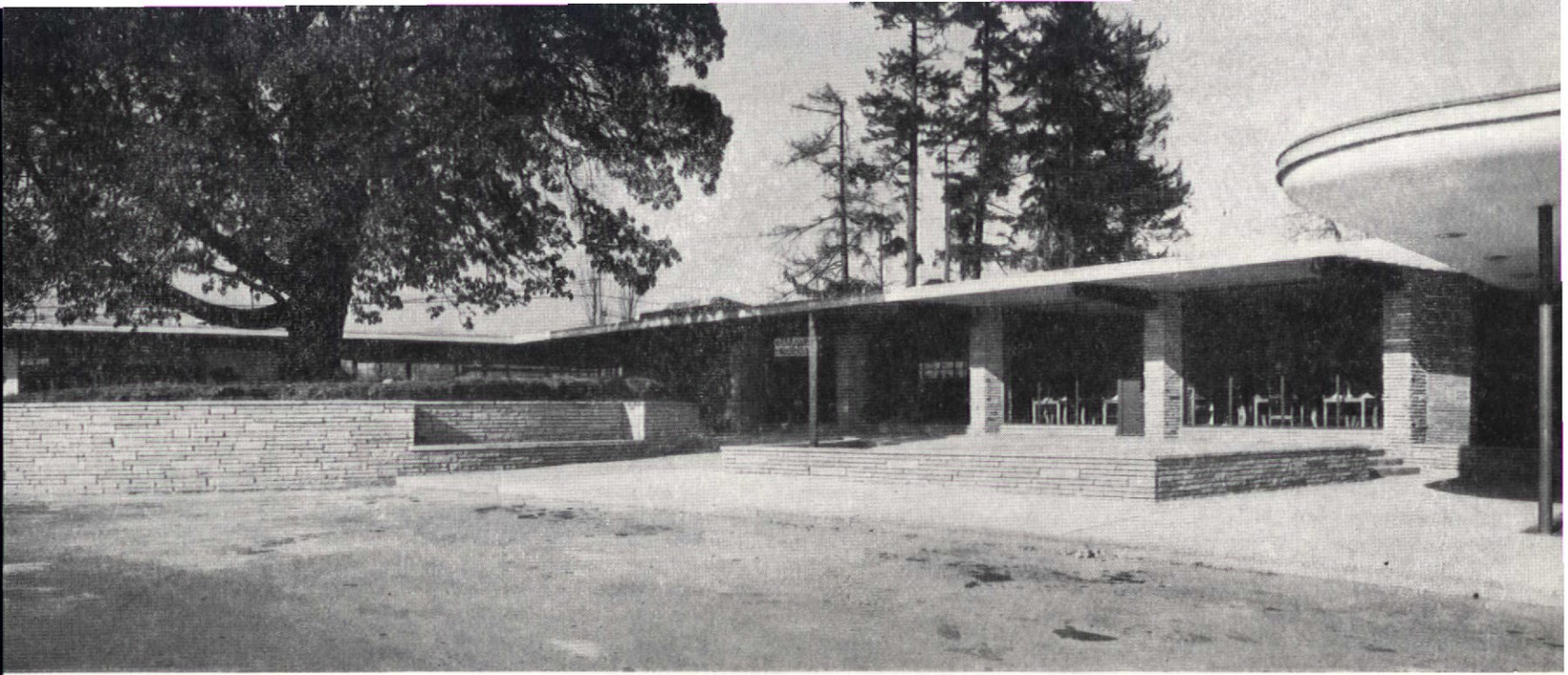
Larry Novak



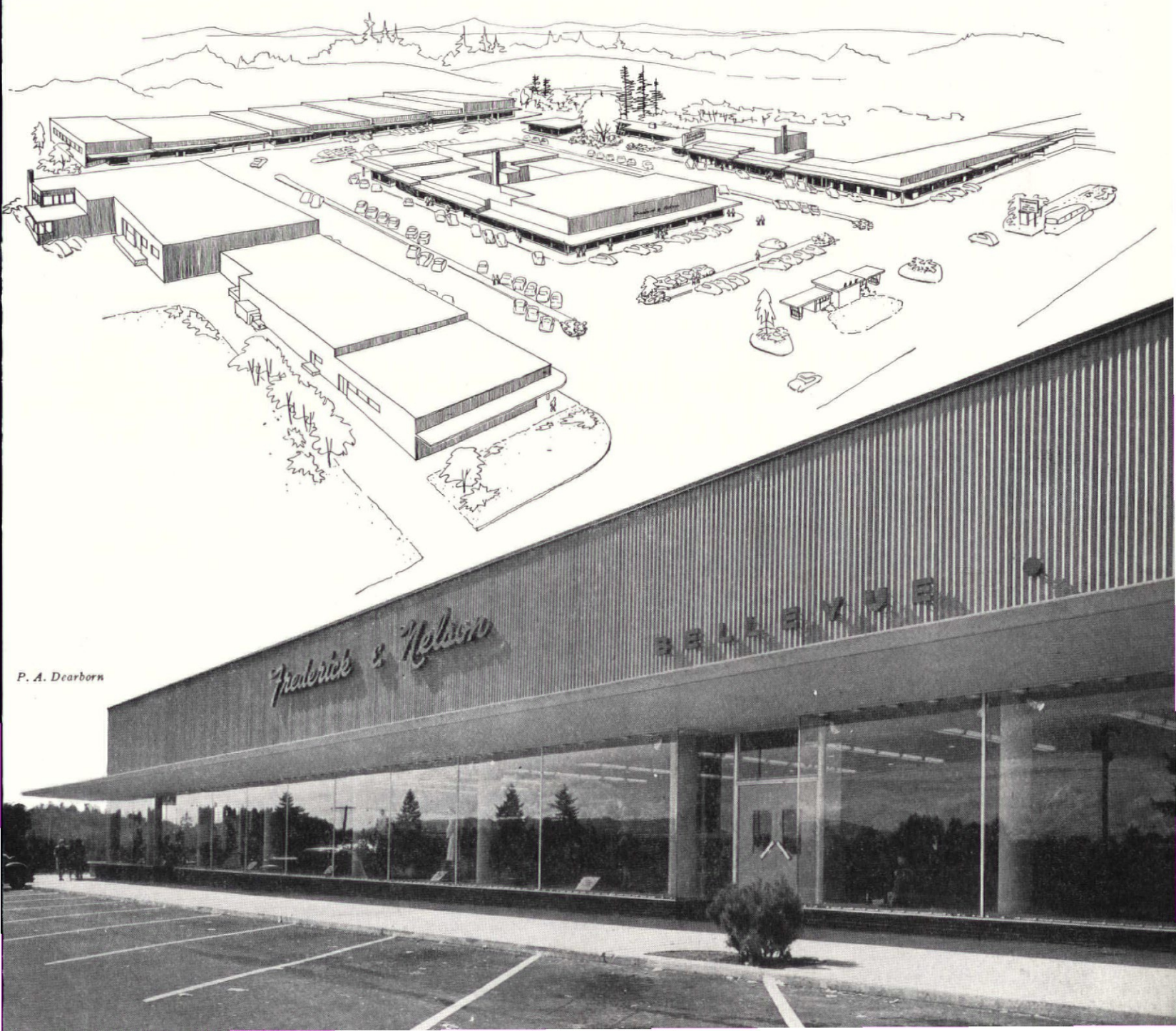
THE FIRST 29 UNITS IN BELLEVUE SQUARE, scheduled for completion this month, will ultimately be supplemented by others. A bank, medical center and undertaker will be added as conditions warrant to enclose square



CANTILEVERED CANOPY which protects all Bellevue sidewalks is dramatically interrupted by glass wall of conservatory between restaurant and florist.



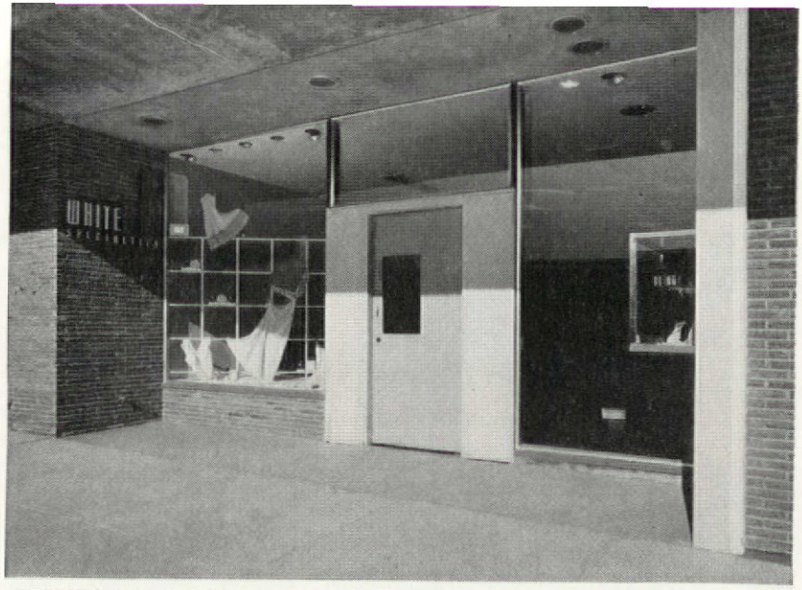
CHARMING GROUP AROUND MADRONE TREE SHOWS HARDHEADED APPRECIATION OF IMPORTANCE OF LANDSCAPING TO SUCCESS OF CENTER



P. A. Dearborn

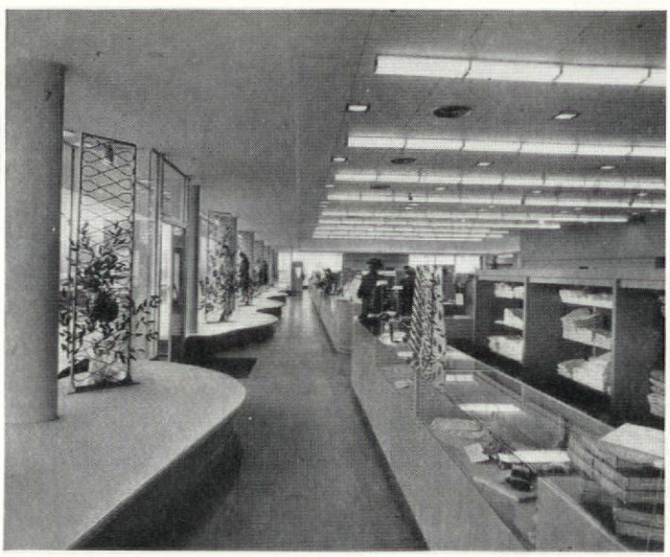
BELLEVUE SHOPPING SQUARE

Acting upon the sound theory than an independent shopping center (i.e., one not located in an existing commercial area) needs a department store as a sort of generator of shopping crowds, owner Freeman got a branch of Seattle's largest store, placed it in a strategic location across the highway front of the center block. Aside from a complete home-furnishing department now being installed in an adjacent area at the rear, the entire store is housed in a huge glass-walled rectangle 94 by 166 ft. With low movable fixtures and no interrupting columns or partitions, the brightly-lit interior itself becomes a display through the continuous show windows toward the east.

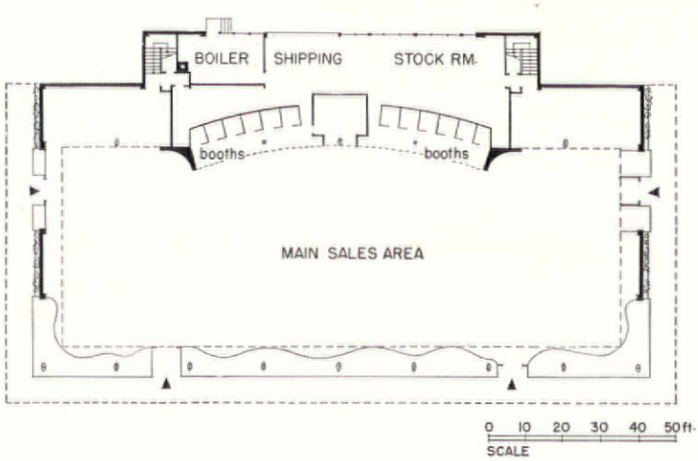


SHOPS HAVE INDIVIDUALITY DESPITE OVER-ALL STANDARDIZATION

Larry Novak



BACKLESS SHOW WINDOWS DOUBLE AS INSIDE SEATING



Photos: P. A. Dearborn

CANTILEVERED CANOPY SHIELDS CONTINUOUS WINDOWS: ABOVE IT, CORRUGATED ASBESTOS BACKS UP ONE OF SQUARE'S FEW SIGNS



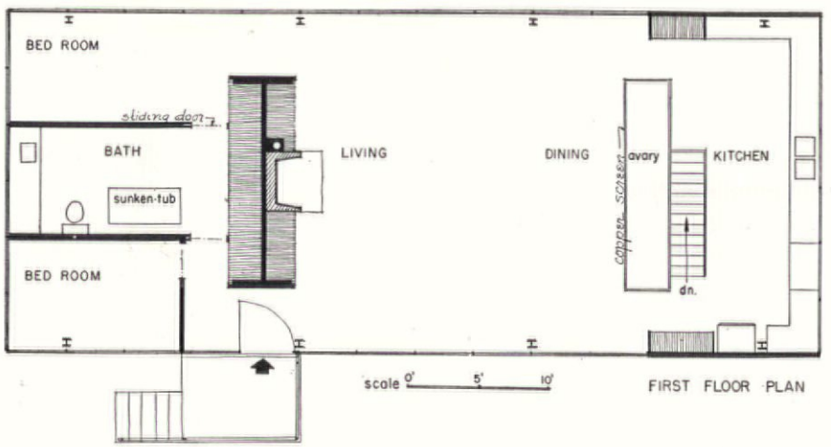
WORK IN PROGRESS!

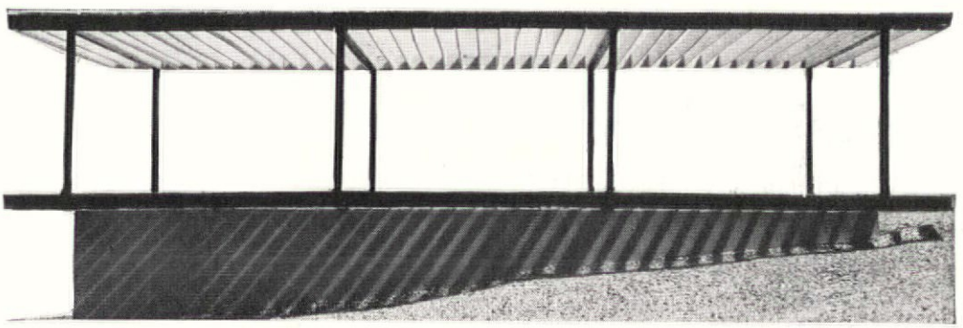
STEEL FRAME HOUSE is dramatically enveloped in glass.

HOUSE IN SAUSALITO
MILDRED BROCK, Owner
MARIO CORBETT, Architect
BERNARD & FEINSTEIN, Contractors

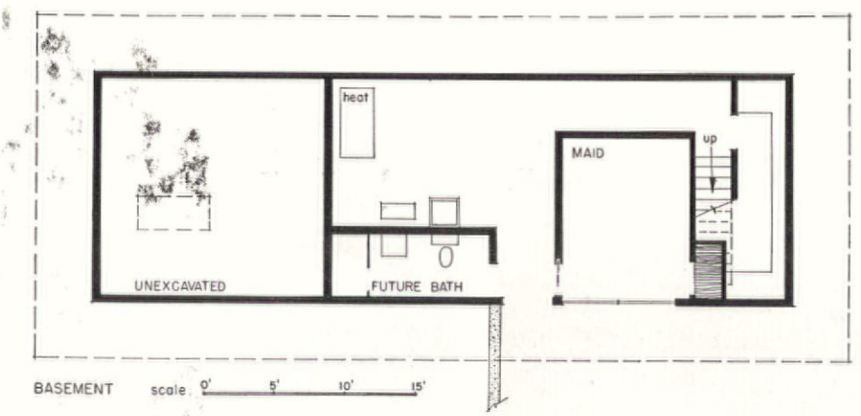
The consummate simplicity of this small house cannot be fully appreciated without a thorough understanding of its construction method. A half-acre hilltop site commanding unbelievable views in four directions dictated the unstinting use of glass. Trees on the swiftly falling terrain required that the living area be at second-floor level. Architect Corbett's solution is a rigid steel frame resting cage-like on foundation walls consisting of conventional 2 x 6 in. wood studs, sheathed with cement asbestos. Because of the cantilevered second floor, the bending moment of the frame is substantially reduced, permitting the use of lightweight steel. Within the frame, ordinary wood 2 x 14's are used for roof and floor joists. An exterior finish of transite plus the intersecting garden wall at basement level contribute an appearance of stability essential to the building.

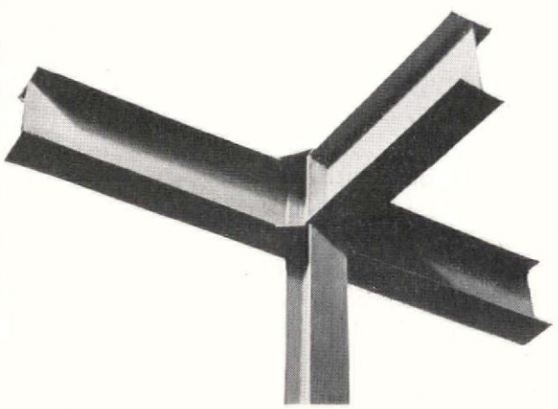
With this type of construction, no interior bearing walls are necessary and on the main floor the architect has made the most of the resulting flexibility. Two deep partitions divide the floor space, one of which contains an aviary, the other, given over to storage, is built around the chimney. In addition to their respective functions, the visual thickness of dense partitions improves the interior scale, avoids the impression of one large, flimsily divided room.





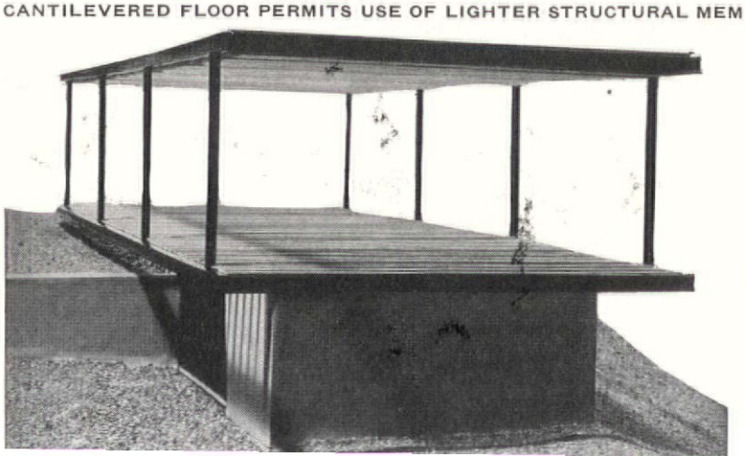
SCALE MODEL SHOWS ROOF JOISTS SUPPPORTED BY LIGHTWEIGHT STEEL FRAMES



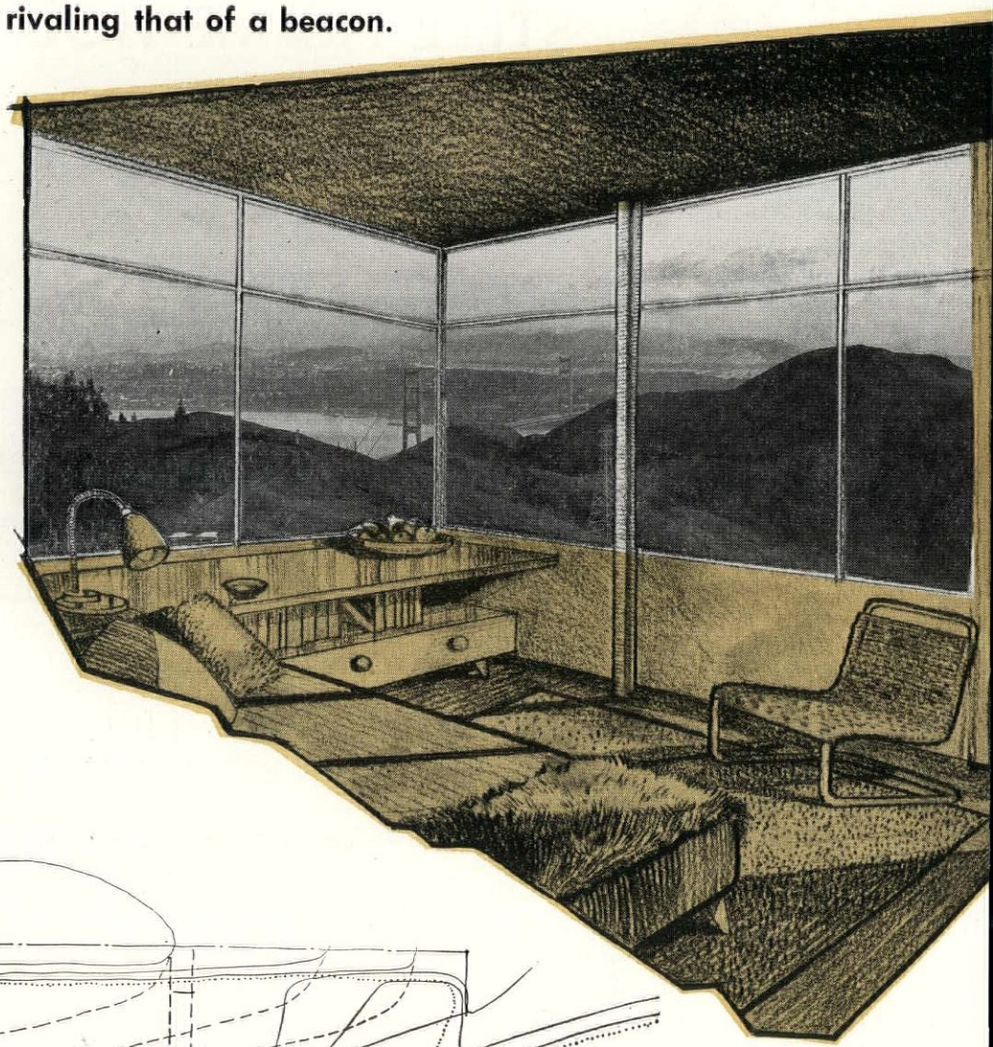


WELDED CONNECTIONS WERE USED THROUGHOUT

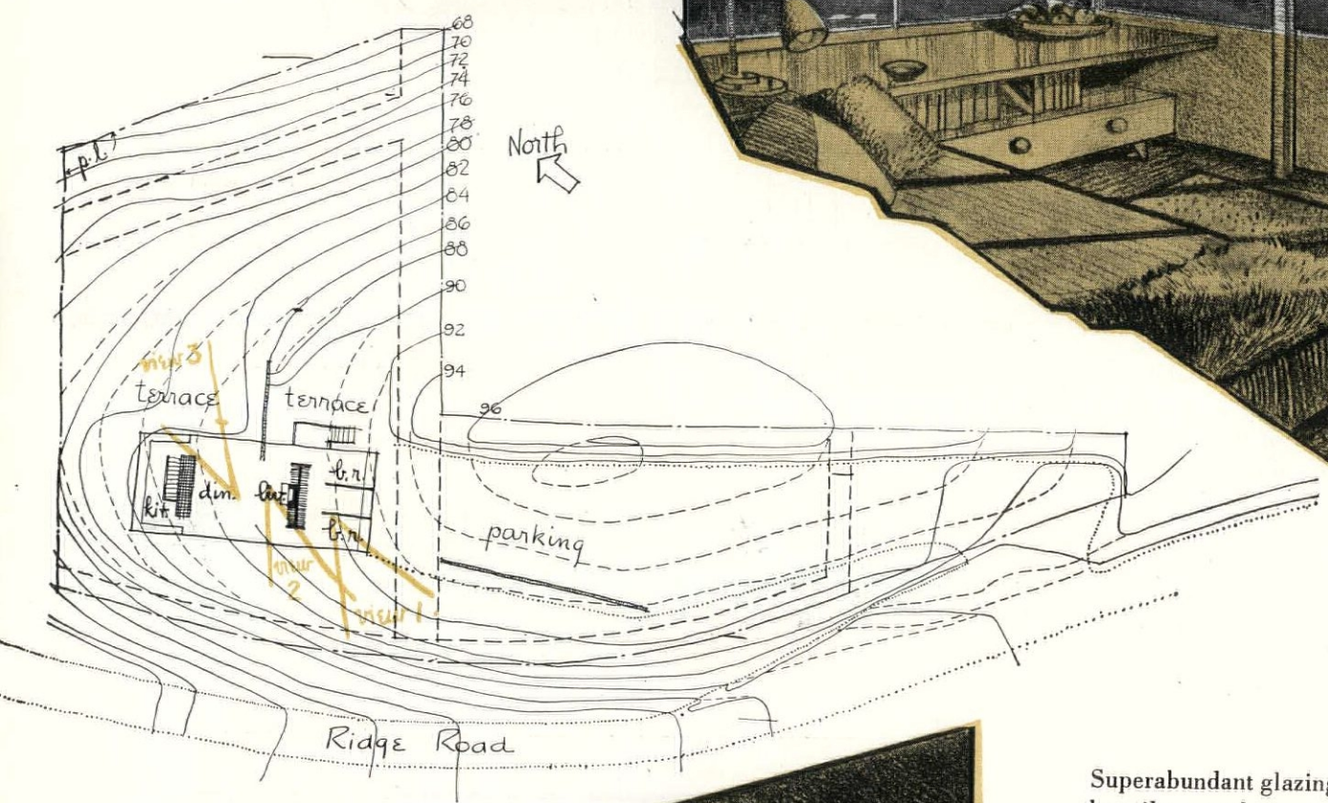
CANTILEVERED FLOOR PERMITS USE OF LIGHTER STRUCTURAL MEMBERS

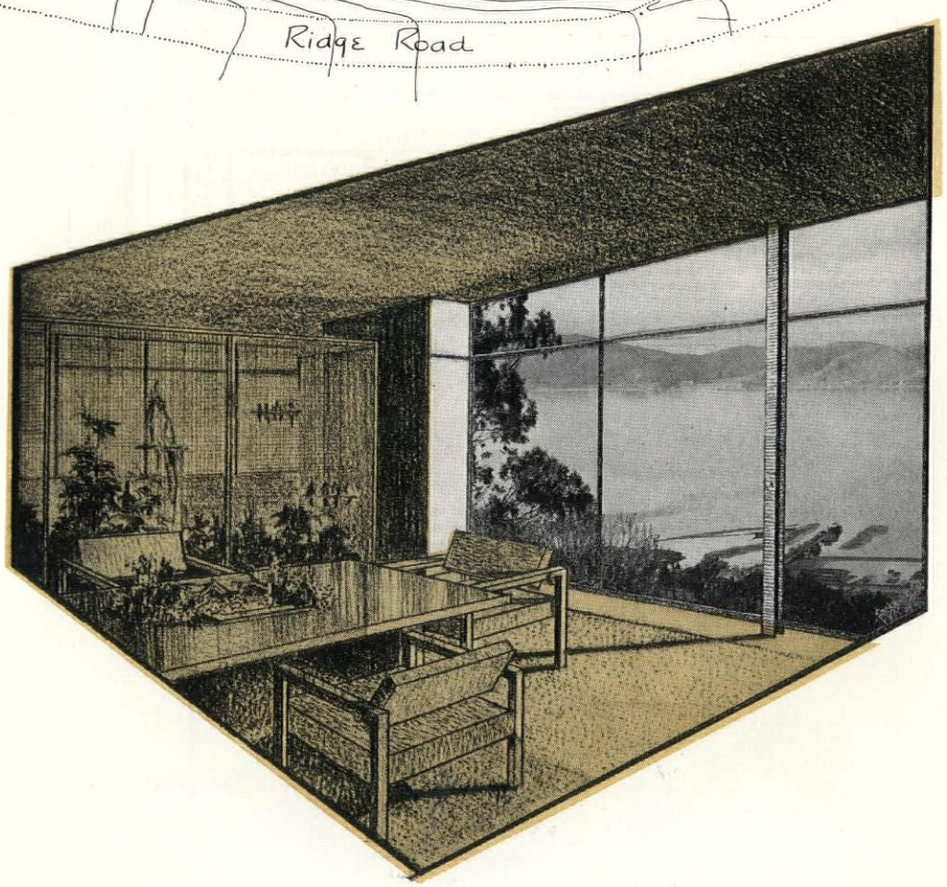


STEEL FRAME HOUSE has visual scope rivaling that of a beacon.



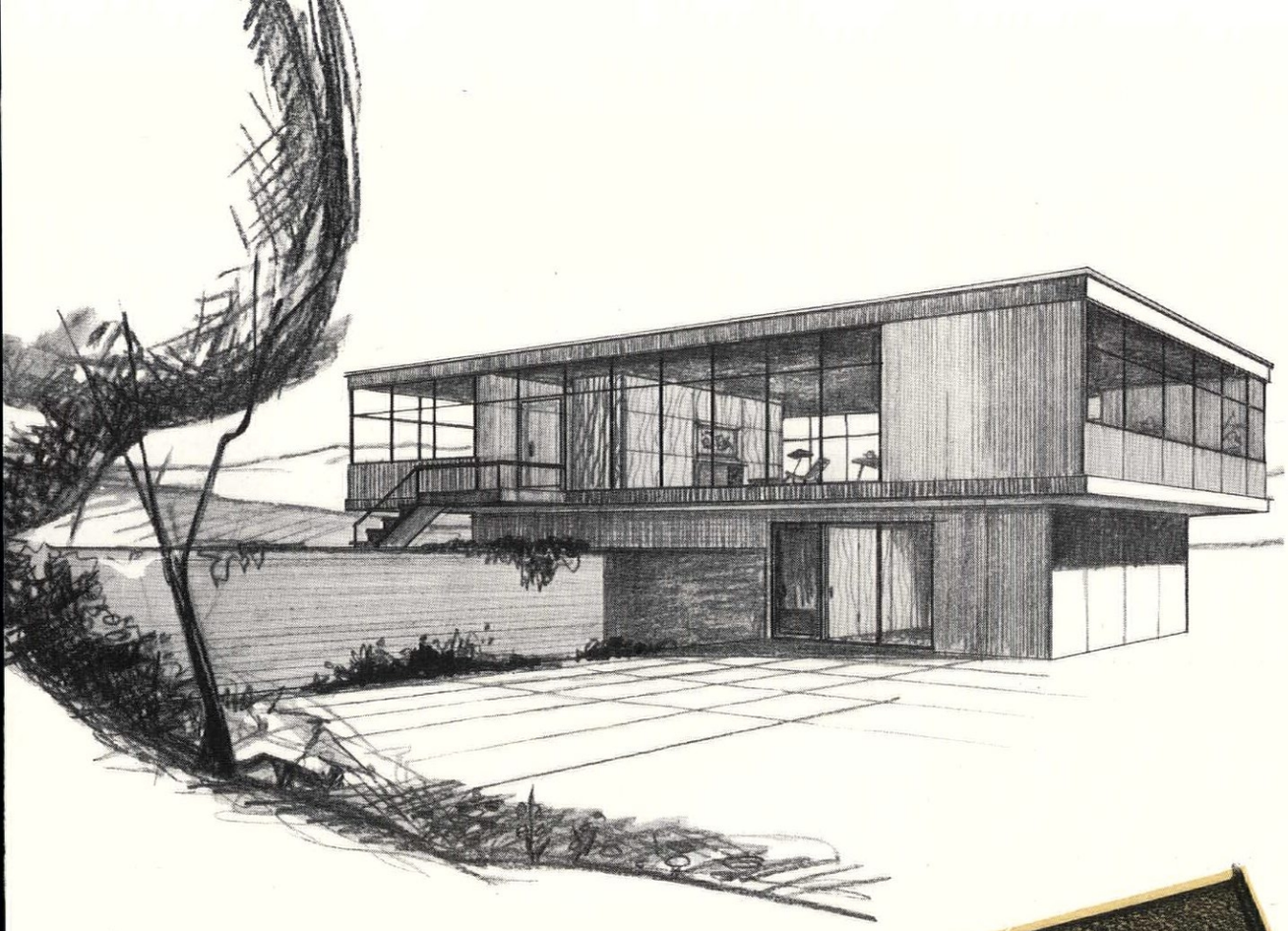
VIEW 1.



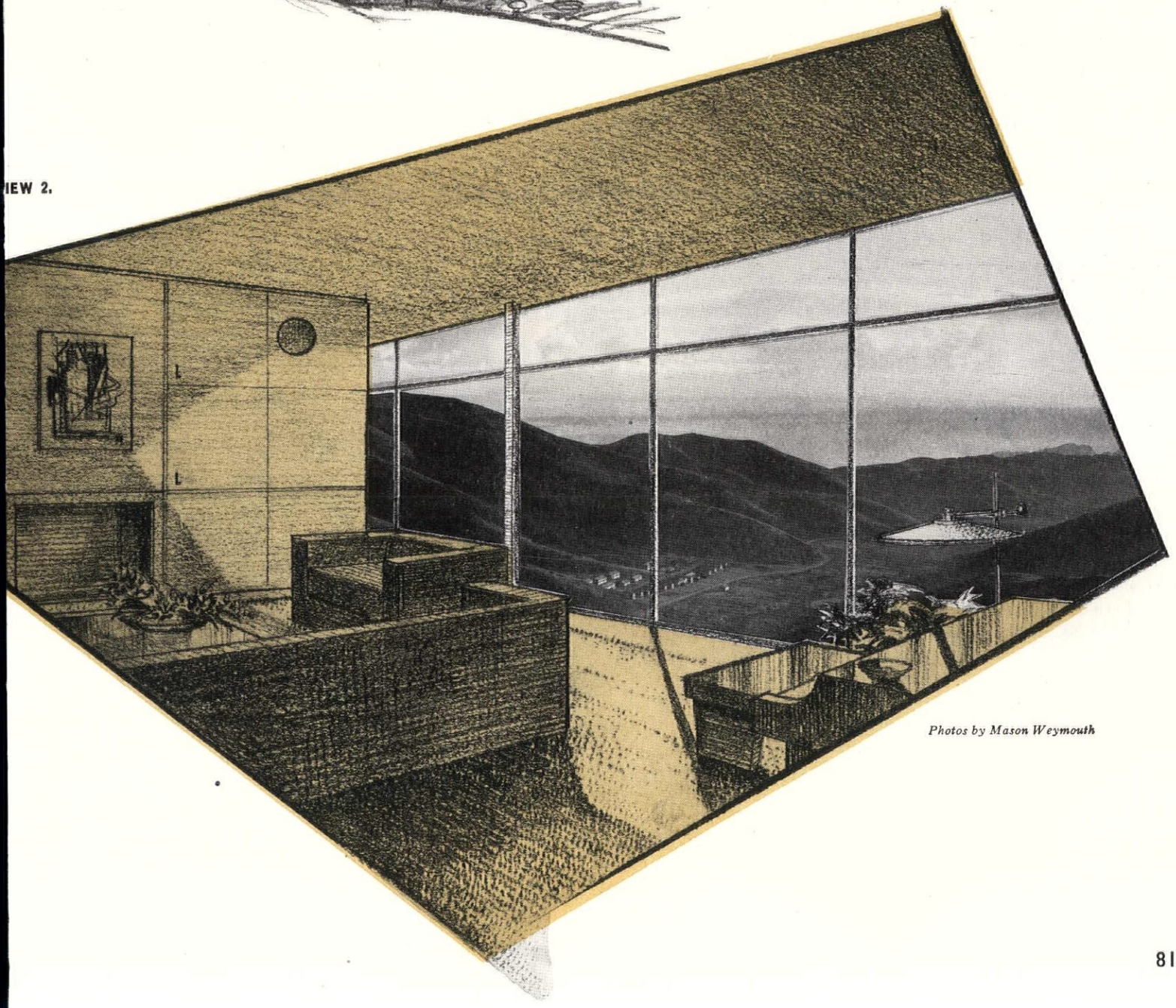


VIEW 3.

Superabundant glazing on four sides of this house happily complements the site, which commands views in all directions such as are found only in the San Francisco Bay area. The house is part of a twenty-acre planned community designed by the same architect. As novel as the framing system is the absence of the overhangs so common in California. Instead, reed blinds are used to control light and outlook, creating wall panels at will. Since the house is air conditioned, all glass is fixed. Outdoor living space is provided in the lee of the garden wall. All interior walls are finished in plywood. Linoleum is used as floor covering throughout. The renderings demonstrate a technique, employed by Corbett, which utilizes photographs taken at the site in combination with interior sketches made in advance of construction.



IEW 2.



Photos by Mason Weymouth

WORK IN PROGRESS!

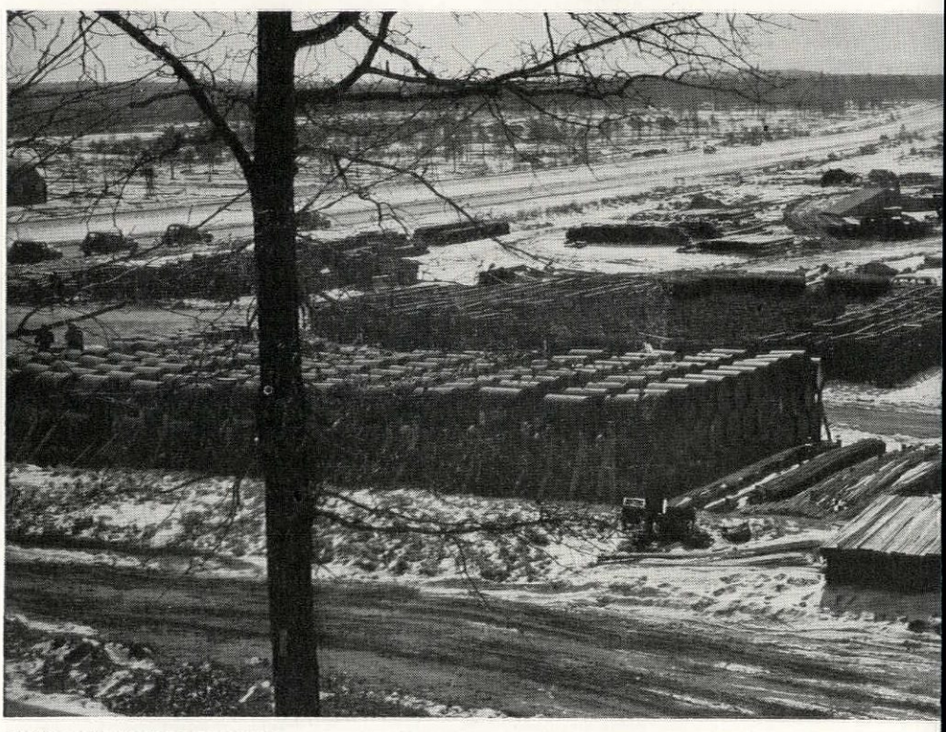
1200 STEEL-FRAMED HOUSES set a postwar price rec

To early Anglo-Saxons, "Harundale" meant "Dale of the Swallows." To nearby Baltimore, Harundale means 299 acres of raw land which are being developed into a complete community with more speed and less cost than seen anywhere in the Northeast since the war. Built for veterans at a price they can afford, Harundale's houses sell for $6,750 with lot, cost only $49 per month on a 20-year basis, including payments for life insurance and community improvement. No cheap cracker boxes, these houses are comparatively big—988 sq. ft. with three bedrooms. They are well built—their welded steel frames will buck a hurricane. Moreover, they boast several improvements over the average house—radiant heat, separate storage and utility rooms, big windows and closets.

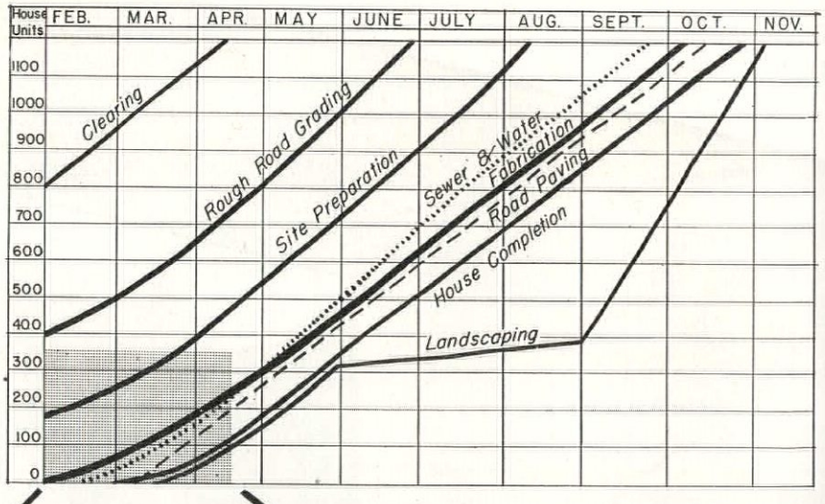
Behind this performance is the Byrne Organization Inc. of Washington, D. C., which has completed $150 million of diversified construction to date, has another $23 million under way. Prewar experience was concentrated on steel-framed garden apartment construction such as the Ford Foundation's 200-unit project at Dearborn, Mich. During the war, Byrne completed 1,342 steel-framed dwellings for the Navy at Norfolk, Va., $29.9 million of Naval Air Base work in the Pacific and ten smaller contracts which brought the total number of Byrne-built dwellings to 7,500.

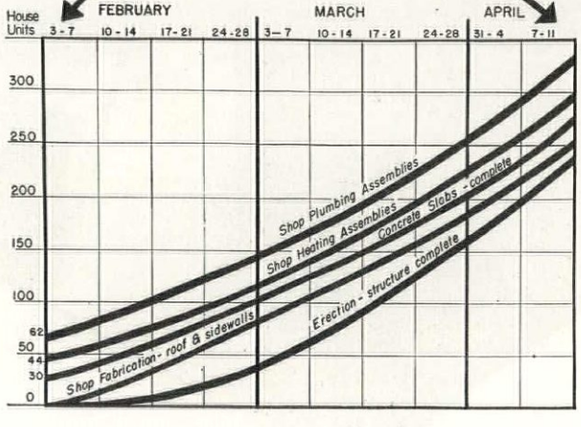
Everything about Harundale reflects Byrne's big background. The big nine-building shop and its equipment represent an investment of $391,000, a third of which will be charged against the project. The big trucks, cranes and earthmoving equipment which dot the site belong to Byrne, for Byrne lets no subcontracts. Big stockpiles are necessary, for production moves at a fast clip—four or five houses a day now (two months after fabrication began), ultimately eight to ten. But, despite the project's big scale, mechanized fabrication permits a relatively small payroll. Month ago it numbered only 396, including 67 apprentice mechanics, 44 field equipment operators, 183 common laborers and eight foremen—all non-union. In addition, the project's administrative staff numbers 66.

Harundale also reflects Byrne's long experience and firm belief in light strip steel construction. Each house contains 4,400 lbs. of steel, uses only 1,500 bd. ft. of lumber (mainly for roof sheathing) and 300 sq. ft. of plywood (mainly for closets). Interestingly, the 50 lbs. of welding rod per house outweigh by 7 lbs. the nails required. Also interesting is the fact that after 207 man hours of streamlined shop work, the industrially produced house shell is conventionally finished with 797 man hours of site labor—including 65 for the steel framing and lathing of partitions and 225 for plastering inside and out. Justification of this division of labor lies in Byrne's high production rate, low sales price.



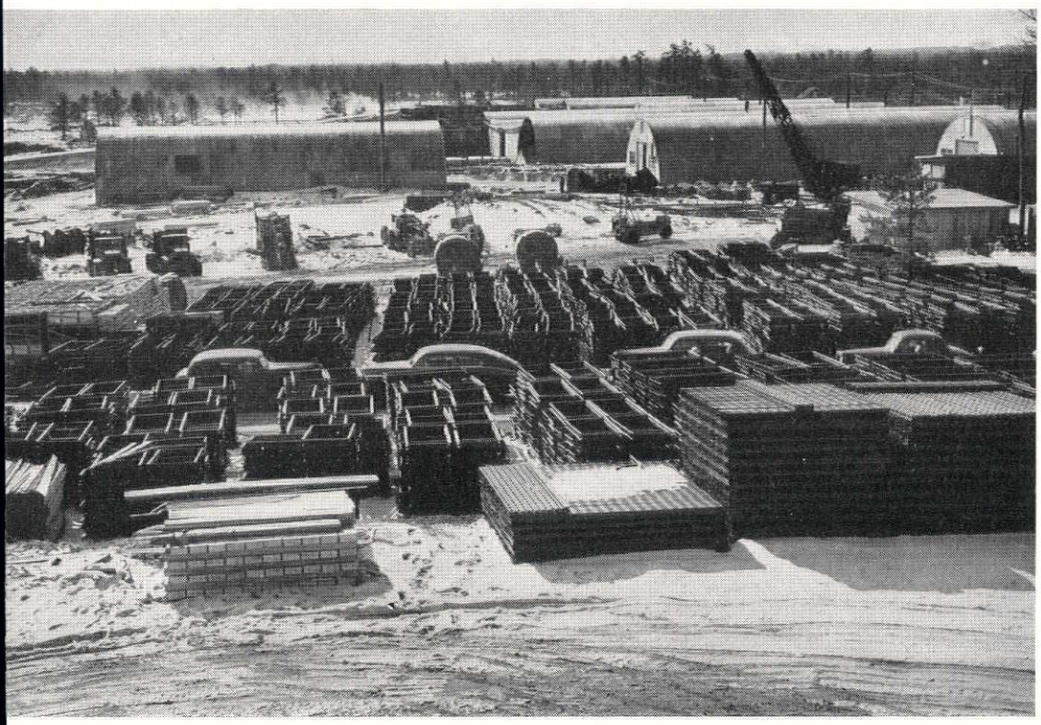
SHOPS AND STORAGE YARDS occupy one corner of the wooded, rolling site. Nine Quonset-type buildings house the production facilities. Except for the paint shop (center) and machine shop (right, not shown) they back up on a 12-car rail siding and (from front to rear) include the electrical shop, carpentry shop, roof production, wall production, plumbing shop, heating shop and warehouse. Stock piles in foreground include 600 steel oil tanks, 175 bathtubs, 200 lavatories, 5,500 steel door frames. Parked beyond are 12 of Bryne's 56 big trucks, cranes and machines.





WORK SCHEDULE indicates that Harundale's 1200 houses will be complete by November, but February snows delayed progress considerably. Chart above shows, among other things, that site preparation must precede fabrication by 1½ months and 200-250 houses, that landscaping will be practically suspended during hot summer months. Detail chart (left) shows that site erection began with backlog of 62 plumbing assemblies, 44 heating assemblies and 30 completed slabs.

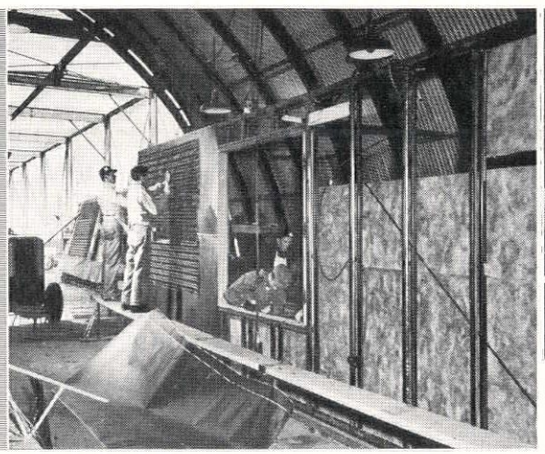
$6,750 for 988 sq. ft. Builder Byrne puts a house under roof every hour for Baltimore veterans.



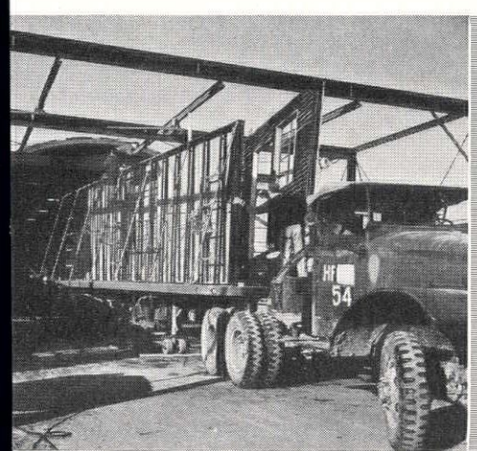
WALLS of welded steel are shop-fabricated, field-finished.



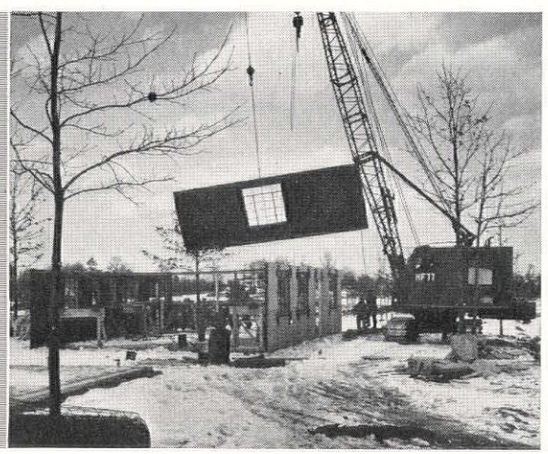
HORIZONTAL JIGS align subassemblies, containing steel window casings, with framing and bracing members. Center line produces rear walls; left, front walls; right, end walls.



VERTICAL RACK holds panels while paper and lath are nailed to inside (near) face of studs and glass insulation board and paper-backed stucco lath are affixed to outside (far) face with the aid of welding gun.

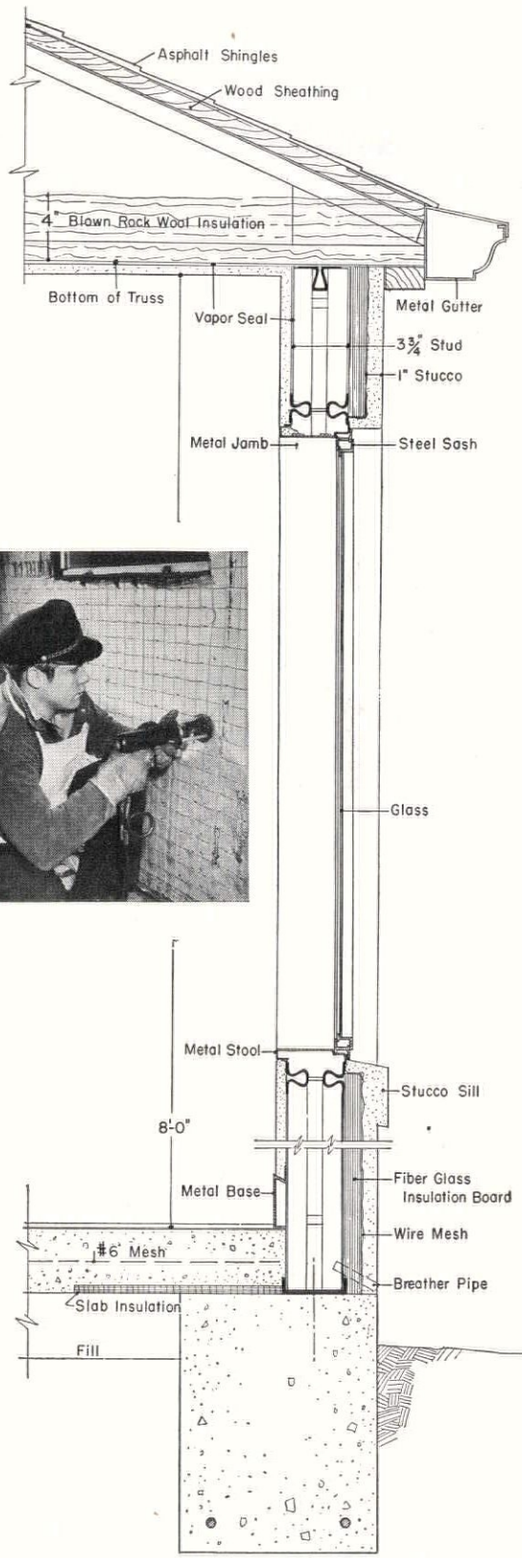


FINISHED PANELS are loaded by overhead tackle at end of 40 x 180 ft. shop. A foreman, 37 men (including 17 welders and helpers) turn out a house's four walls every hour.



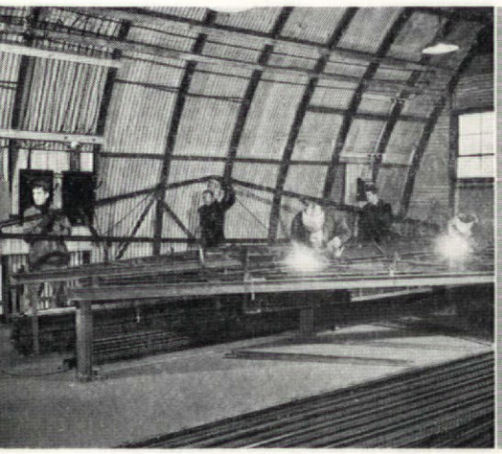
AT BUILDING SITE wall panels are swung into position, bolted to foundation and temporarily wired together. First two walls are held by temporary rigging. Heaviest wall: 1,200 lbs. Scaffolding is for later use of welders.



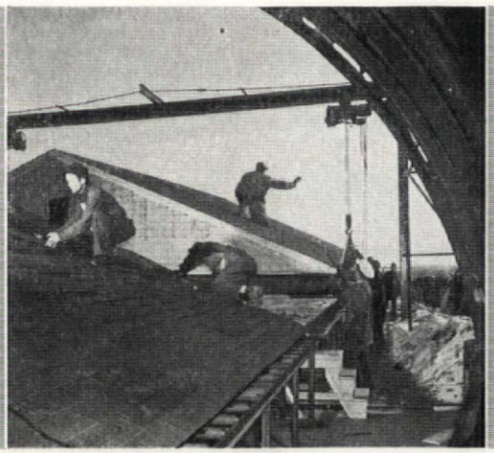


TYPICAL SIDE WALL SECTION
scale 0' 1' 2'

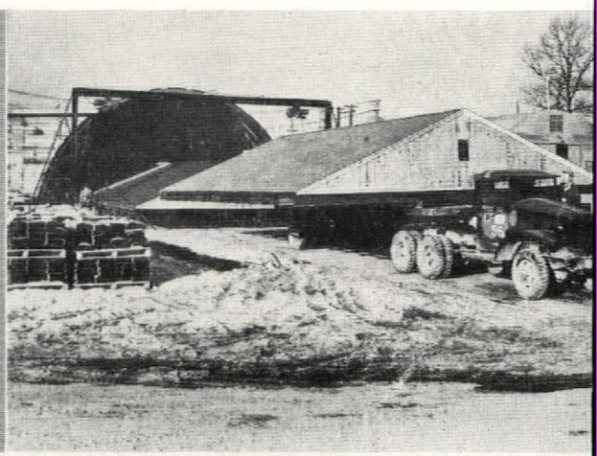
ROOF, shop finished in one big piece, is trucked to site, dropped and welded in place.



TRUSS ASSEMBLY takes place at end of 180 ft. shop nearest rail siding. Working alternately at two identical jigs with two welders, three men place the 15 parts and remove a completed truss every 4 min. Roof requires 20 trusses spaced 2 ft. o.c.



THIRD STAGE of assembly involves application of asphalt shingles over building paper. Prior stages (not shown) include 1) welding trusses and braces into rigid frame, 2) nailing wood sheathing to trusses, stucco lath to gable ends. Completed roof is lifted while truck backs under.

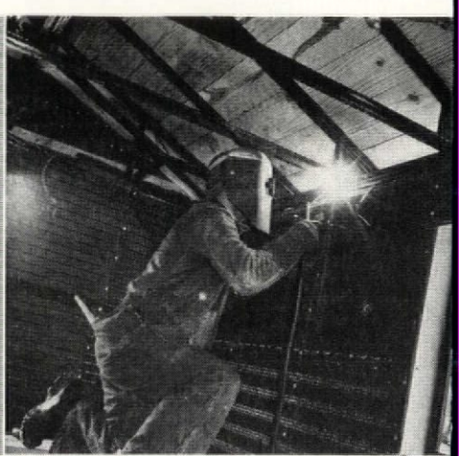


DELIVERY of roof, complete with false chimney, is accom plished by flat-bed trailer hooked to ex-Army 6 x 6 tracto Roof shop is manned by 7 welders, 14 carpenters and 17 helper who turn out a roof every hour. Impossibility of storing roof requires that the two site erection crews also move at a fas pace. Attic louvers are normally installed in shop.

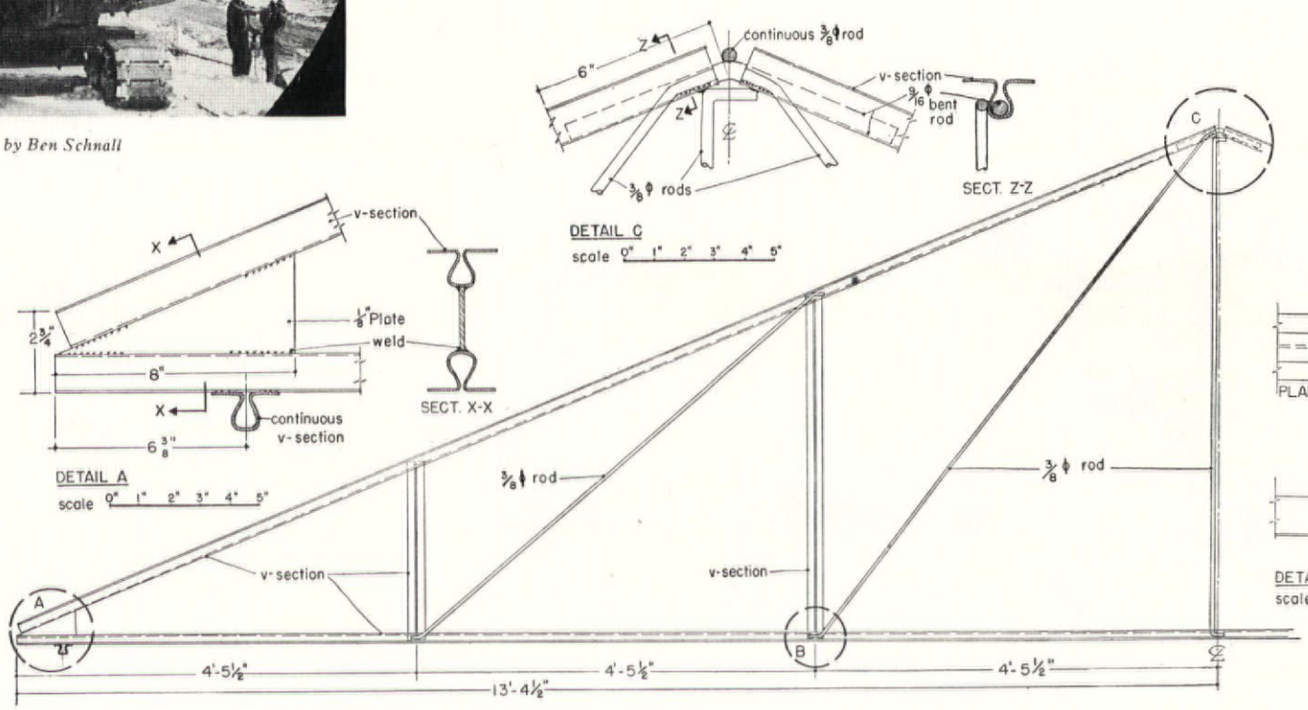


Photos by Ben Schnall



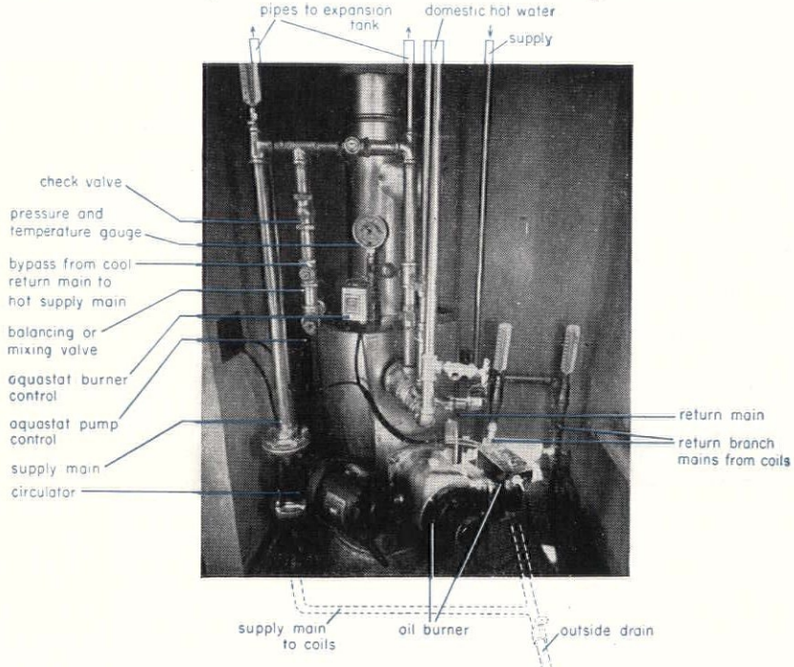


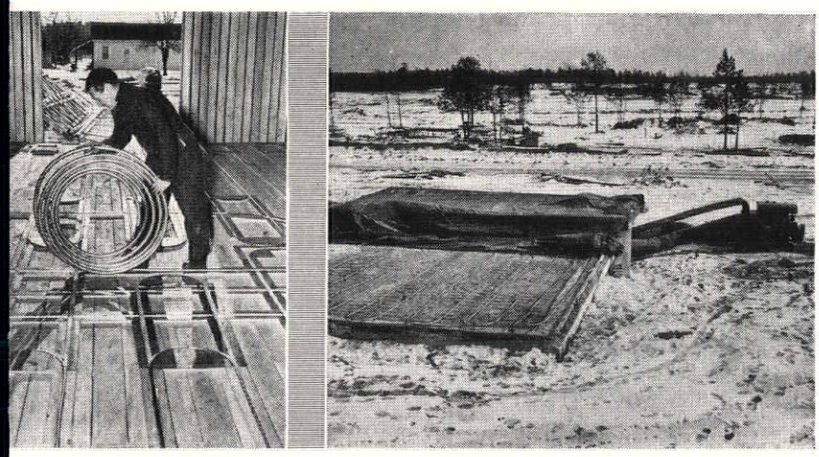
HOUSE TOP, swung into position by crane with 60 ft. boom, is dropped last couple of inches by manual controls in th tackle. Eight men put these outside walls and 4½ ton roof in place in an hour, despite 25 m.p.h. wind. Normally the job, including welding the components (above right), requires 25 man hours. Preparatory work includes fabrica tion of heating grids in shop template (17 man hours), pre-assembly of plumbing (20 man hours), construction o foundation and slab (125 man hours—note forced drying of sand fill in picture opposite).



HEATING features prefabricated radiant floor coils, a pint-size boiler, efficient operation.

At Harundale, the Byrne Organization has gone a long way toward answering two poignant house heating questions: 1) Can minimum houses afford radiant heating and 2) is it as effective as advertised? Byrne's answers are affirmative. The installed cost of the hot water radiant heat and domestic hot water systems, including all labor, materials and equipment, is $425—only 10 per cent of overall construction cost. (A forced air system and separate domestic hot water heater for the same house would cost nearly as much.) Answer to the second question is revealed in the mid-February test results charted below, right. Highlights: heat is uniformly distributed throughout the house; floor to ceiling temperature variations do not exceed two degrees; wall surfaces and equipment (bathtub, etc.) are warmed almost to room temperatures; domestic hot water is supplied quickly and in ample quantity; boiler efficiency at 84.5 per cent is excellent; and the annual operating cost during a year of normal Harundale weather (5,471 degree days) will approximate $64.

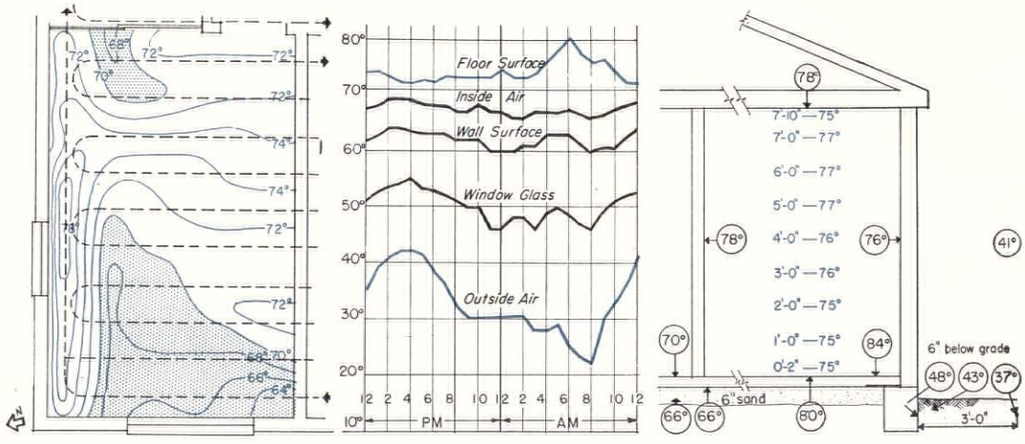






Steel windows are neither weatherstripped nor double glazed, but insulation reduces the conductivity factor for walls to 0.18, for ceiling and roof to 0.12. On the basis of these factors, heat loss, including that for the glass, floor and infiltration, is calculated at 46,041 BTU for an outdoor temperature of zero. During normal operation, boiler water is 160 degrees. It is mixed with return water at 85 degrees and delivered to the grid at 110 degrees. Copper coils, shop-fabricated into sinuous grids, measure ½ in. in diameter, are set 1 in. from the bottom of the 4 in. slab. Mains measure 1 in., branch mains, ¾ in.

Since an air control (thermostat) was recognized as inadequate for the panel radiant system and since outdoor controls, while admittedly desirable, were too costly, Byrne's engineers installed 1) an aquastat operating on the line voltage thermo switch principle in the return line which activates the pump when the return water drops below 85 degrees, and 2) an aquastat which activates the burner when the boiler water falls below 145 degrees. (A wall thermostat in the living room acts as a secondary control on the pump.) As indicated by the temperature graph (center, right) the thermo switch reacts quickly to rapidly changing temperatures (and adjusts the heat supply accordingly), but during a period of slowly changing temperatures it tends to create a lag of several degrees.

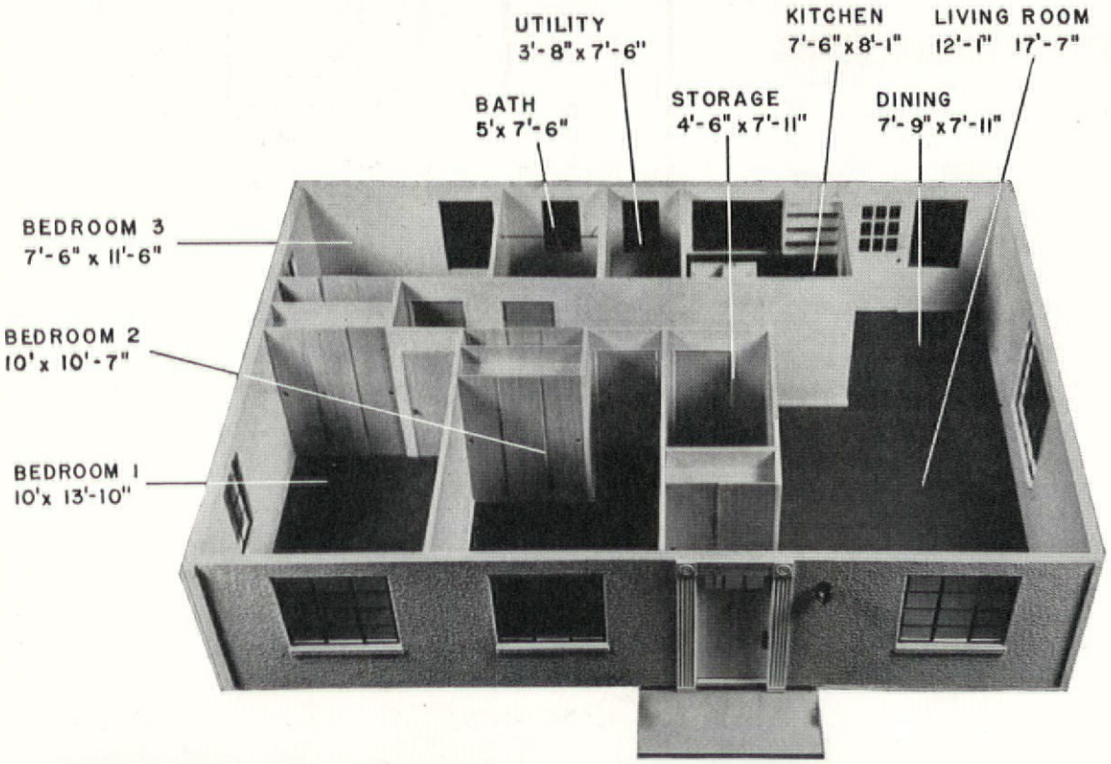


ISOTHERMS (left, above) show horizontal temperatures in the master bedroom 2 in. above the floor. Interestingly, the temperature extremes are both under windows, and the coldest spot is over the hottest point in the water supply line. The latter condition may be caused by the lack of sun on the windward west wall, by the lack of insulation between the steel partition frame and the wall's steel channel sill or by the lack of natural air circulation in this remote corner. On the other hand, high temperatures along the north wall are explained by the proximity of the hot water supply line to the bends in the grid. Note that, except for these extremes, the floor in general is quite evenly heated, the temperature ranging from 70 to 75 degrees. The 24-hour graph (center, above) indicates that the air inside the bedroom varied less than 4 degrees, while, outside, it dipped from 42 to 22 degrees. Noteworthy in this connection are the opposing curves traced by the floor surface and outdoor air temperatures (the colder the outdoor air, the higher the floor temperature). The stylized cross section (right, above) graphs the remarkably small temperature gradient between floor and ceiling and, with reference to the underground spot readings, indicates the importance of slab insulation to effective radiant heating.

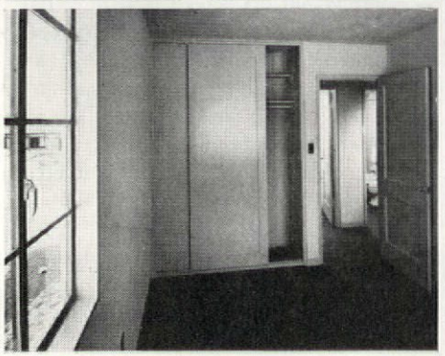
HOUSE DESIGN is intelligent in plan, economically simple in exterior detail.

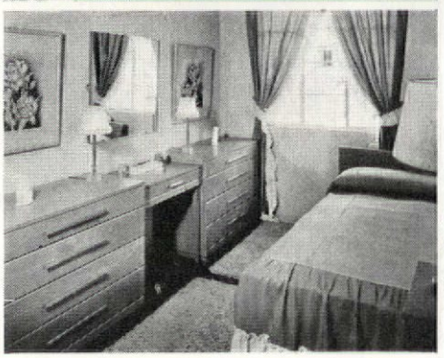


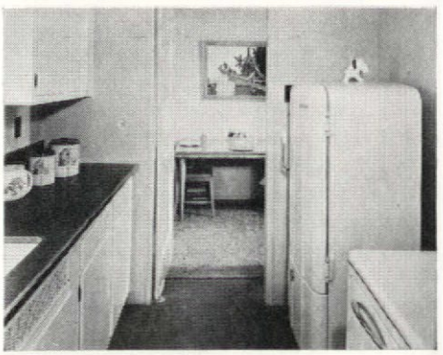
MODEL HOUSE IS THE BASIC STUCCO-FINISHED UNIT PLUS SHUTTERS













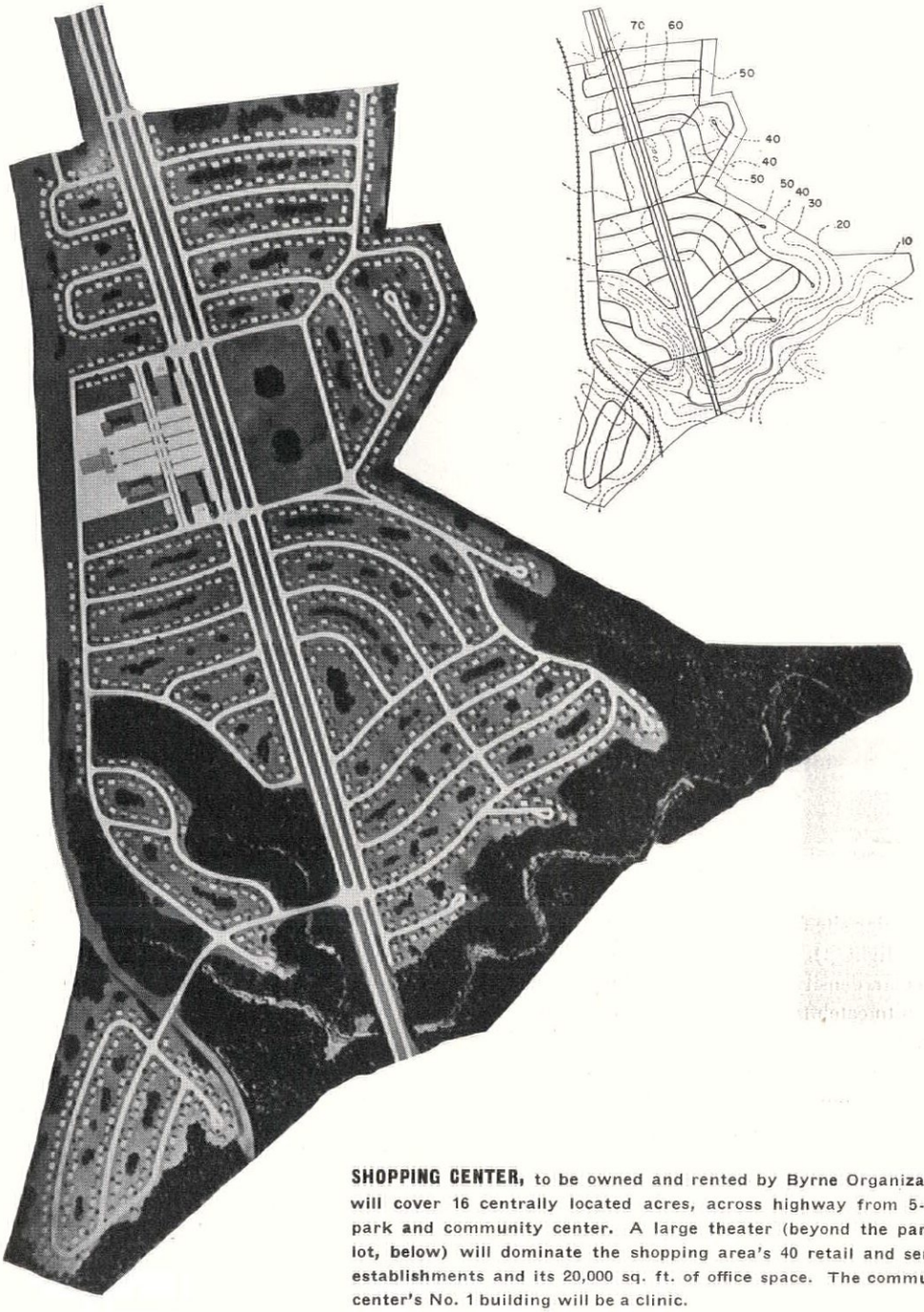
INTERIOR DESIGN of the 26 x 38 ft. three-bedroom house (expanded 2 ft. in length since these pictures were taken) features large windows, a vestibule with coat closet, sizable dining alcove, compact all-electric kitchen, storage room to offset lack of basement, separate utility room for furnace and clothes washer, five big closets with sliding doors. Plaster is sand finished; concrete floor is covered with plastic paint. All 1,000 three-bedroom houses will be identical in plan. The 200 two-bedroom units will measure 26 x 30 ft. Both have oil storage tanks above grade, below utility room window.

SITE PLAN contours, park areas and curved streets to relieve monotony of standardized houses.

An erstwhile game preserve close by the small town of Glen Burnie (pop. 1,100), 299-acre Harundale straddles a dual express highway connecting Baltimore (5 mi.) with Annapolis (16 mi.). Like the electric railroad on the tract's west boundary, the highway was a transportation asset but also a site planning problem. Byrne's planners solved it with flanking access roads which feed the contour-following streets and culs-de-sac. An admirable site plan, it reserves 64 acres for parks (mostly along the streams and deep ravines to the south) and 21 acres for shopping and civic facilities. Asphalt streets with concrete curbs, gutters and sidewalks cover 60 acres, leaving a balance of 154 acres for the 1,200 60 x 100 ft. lots.

Against this interesting, well-planned backdrop, appearance of the completely standardized houses will be varied by staggered building lines, various orientations and many finishing colors and materials—basic stucco, asbestos shingles, bevel siding, brick veneer, redwood and aluminum. Monotony will be further relieved by accessory garages, porches, trellises and shutters.

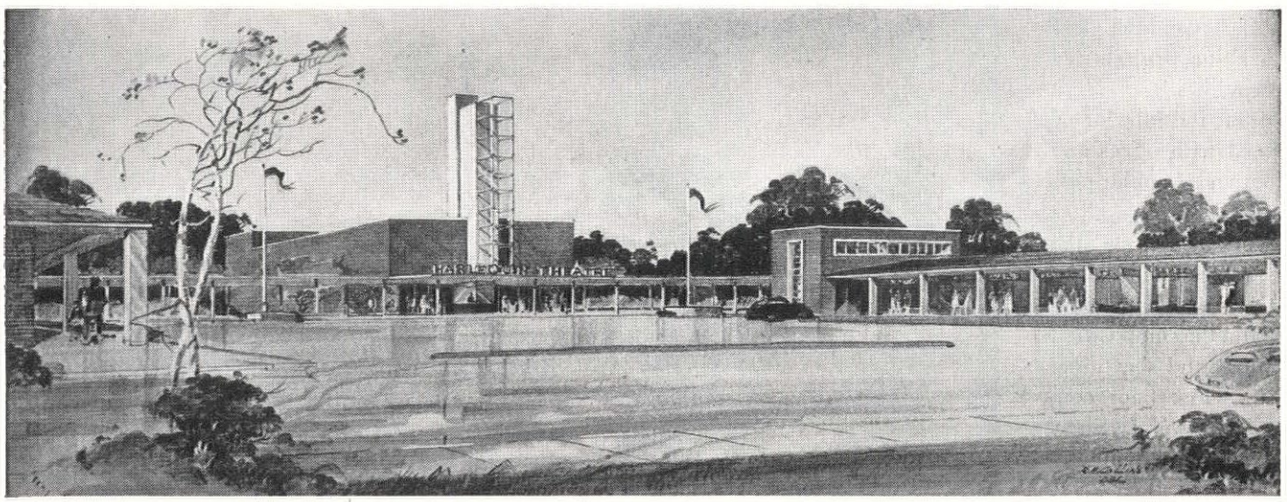
The basic sales price of $6,750 ($6,400 for the two-bedroom unit) is 85.7 per cent house, 3.3 per cent raw land, 11.0 per cent site improvement and a bargain for Baltimore industrial workers. Twenty-year mortgages written by Allied Building Credits, Inc. require only $37.96 per month for interest and amortization. (Fifteen and 25-year loans are also available.) Total monthly charges are brought to $49.18 by $6.56 for taxes, $1.36 for fire insurance, $1.80 for sewer and water assessments, $1.00 for life insurance which will carry the mortgage for 30 months after death of the breadwinner, and 50 cents for Harundale's Improvement Association.



SHOPPING CENTER, to be owned and rented by Byrne Organization, will cover 16 centrally located acres, across highway from 5-acre park and community center. A large theater (beyond the parking lot, below) will dominate the shopping area's 40 retail and service establishments and its 20,000 sq. ft. of office space. The community center's No. 1 building will be a clinic.

PRINCIPLE MATERIALS AND EQUIPMENT

STEEL: Wall and roof framing—Macomber, Inc. Partition framing and metal lath—Milcor Steel Co. Paper backed wire mesh, Pittsburgh Steel Co. Rods—Bethlehem Steel Co. INSULATION: Owens-Corning Fiberglas Corp. WINDOWS: Fenestra, Detroit Steel Products Co. PLASTER: U. S. Gypsum Co. CEMENT: Alpha Portland Cement Co. ASPHALT SHINGLES: Bonafide Genasco, Inc. HARDWARE: Russell & Erwin Mfg. Co. BATHROOM FIXTURES: Briggs Mfg. Co. PLUMBING LINES: Chase Brass & Copper Co. HEATING: Copper tubing—Lewin Mathes Co. Boiler—Briggs Filtration Co. STUD WELDING EQUIPMENT: Nelson Stud Welding Corp.



WORK IN PROGRESS!

FURNITURE STORE in Los Angeles is designed for motor attention and minimum co

WYNN FURNITURE STORE, Owner

GRUEN & KRUMMECK, Designers

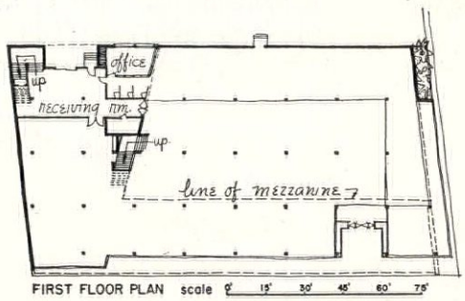
CONTRACTING ENGINEERS CO., General Contractor

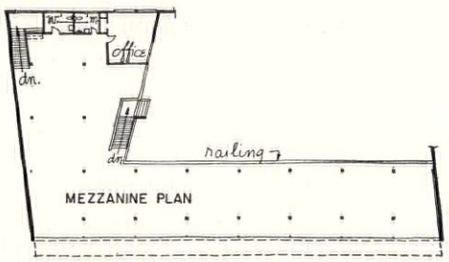


Its angular site fronting on a suburban boulevard whose light pedestrian traffic is offset by heavy vehicular density, this store employs an angular design to catch the eye of passing motorists. The main front is dominated by a huge vertical fin whose purpose is pure and simple exhibitionism. The same purpose is served by the building's strong colors: dark blue, terra cotta, lemon yellow, chocolate brown and warm gray. Also commanding attention, the mezzanine display windows project toward the street to give motorists an optimum view of the furnished room models. Bothersome glare and reflections are minimized by the angular position of the glass, by ample interior light from recessed ceiling fixtures and by a canopy which extends 7 ft. beyond the glass —the same distance the mezzanine projects beyond the ground floor show windows.

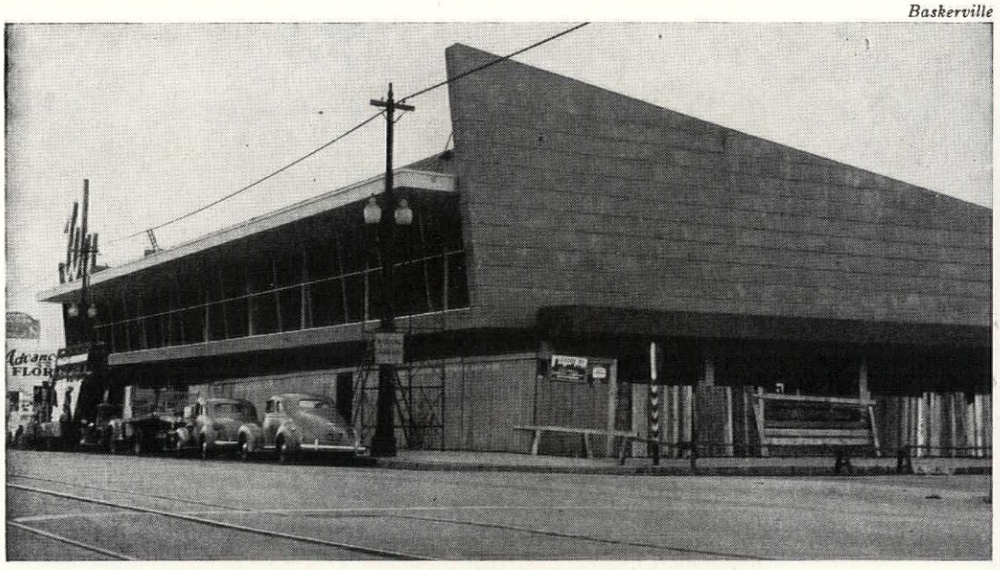
Entered near the street corner, the interior of the building is flexibly planned with offices and services concentrated in one corner. Angular partitions repeat the exterior motif.

Like the design, construction reflects the owner's requirement for utmost economy. The steel skeleton, forming 20-ft. bays, is framed with lumber, finished with stucco; and the composition roof is supported by wood joists and sheathing. Walls and ceilings are plaster; first floor concrete; second floor asphalt tile on wood. Show windows are set in sash of alumilited aluminum. Construction cost: about $6.50 per sq. ft.

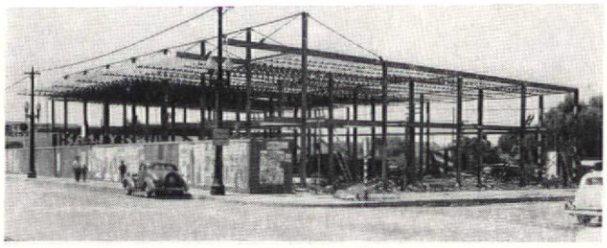




Baskerville

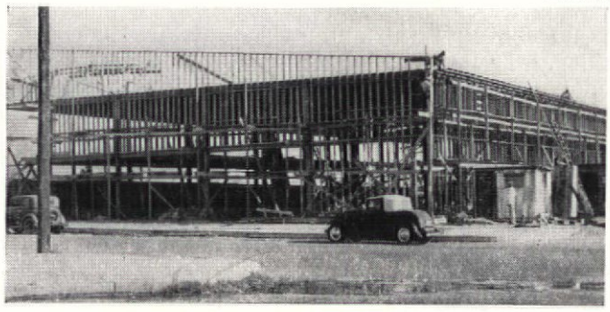


PROJECTION OF MAIN FRONT IS ACCENTUATED BY ANGULAR FIN OF COURSED STUCCO

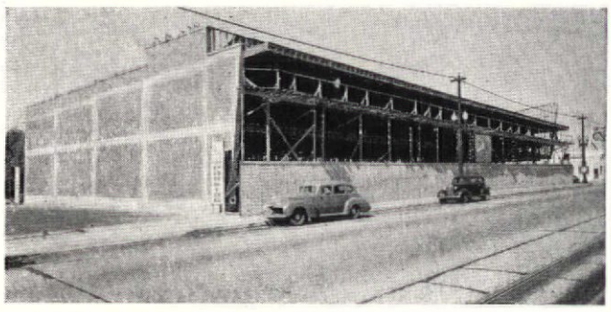


RODS TIE MEZZANINE CANOPY TO STEEL SKELETON

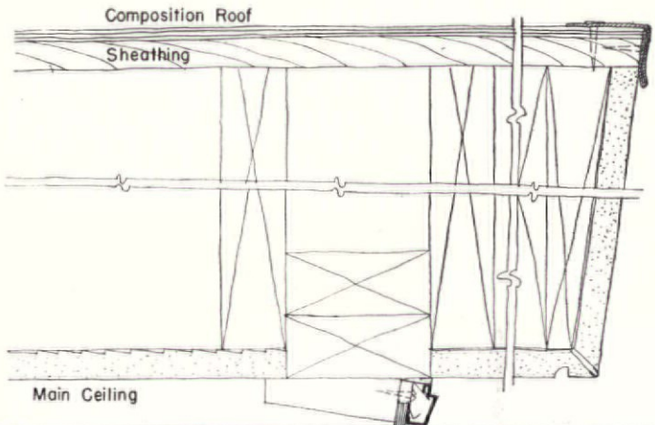
Phototek

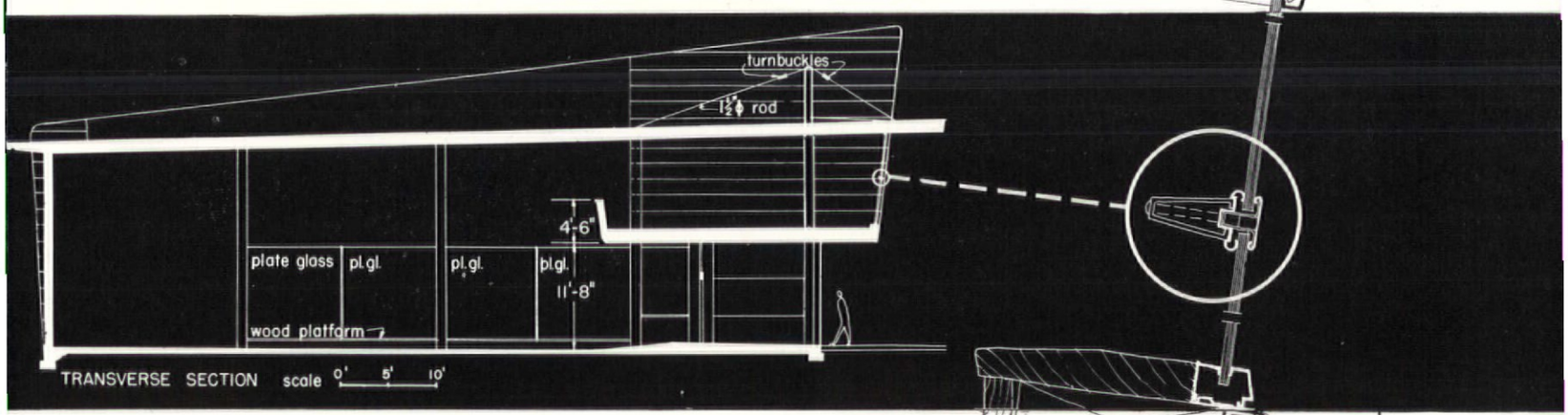


WOOD FRAME ON STEELWORK SUPPORTS STUCCO



HOARDING CONCEALS GROUND FLOOR GLASS FRONT

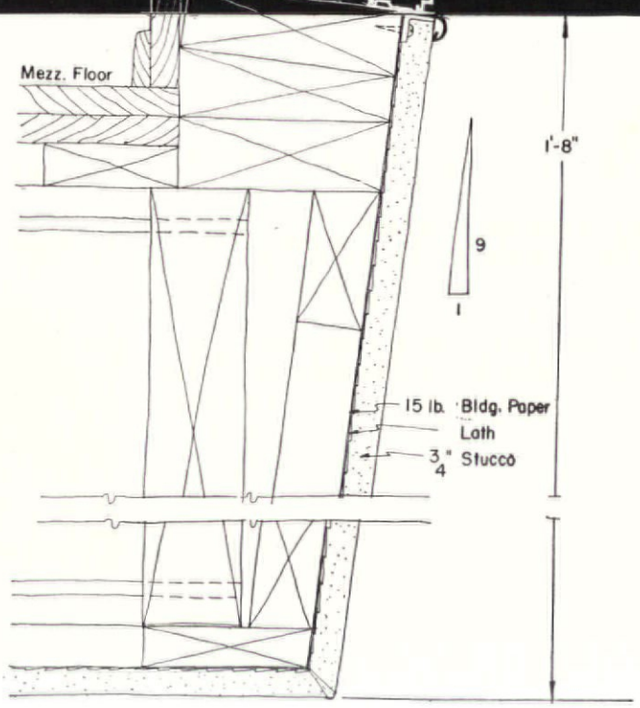




MEZZANINE'S DISPLAY WINDOWS OVERLOOK STREET



Baskerville



WORK IN PROGRESS!

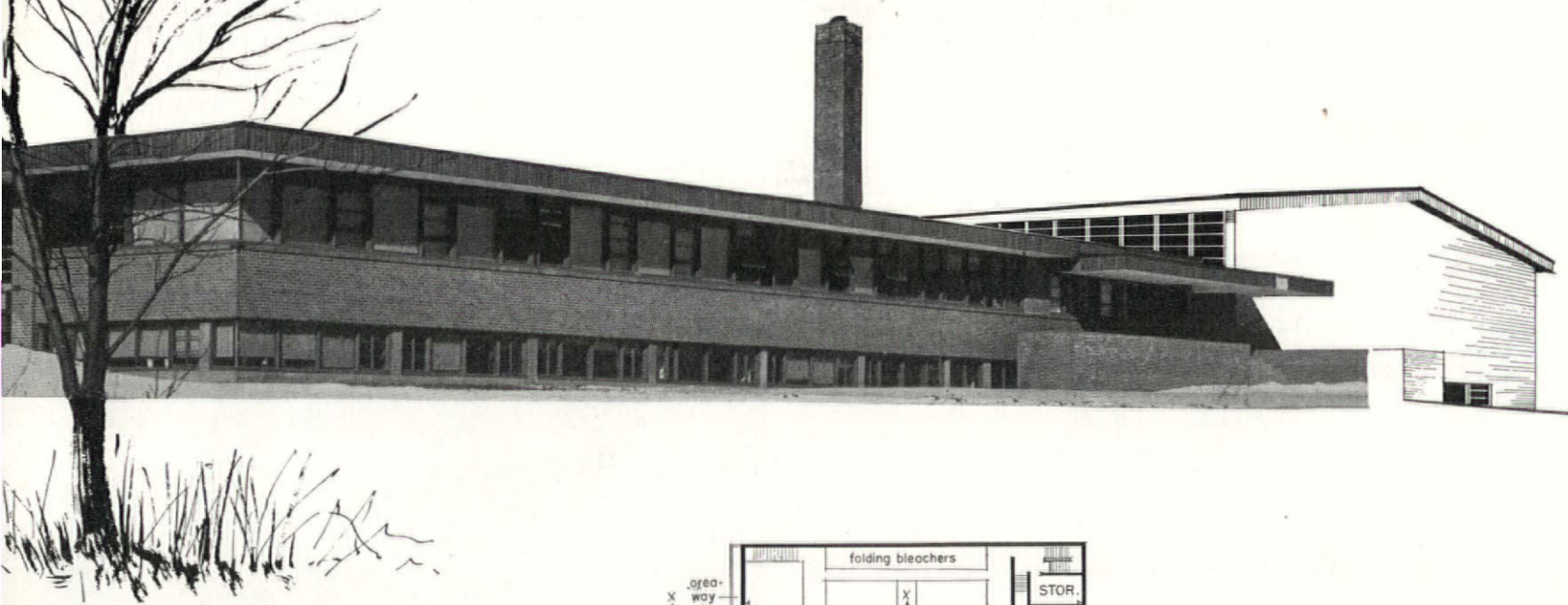
SMALL HIGH SCHOOL in Grayslake, Ill. economically provides

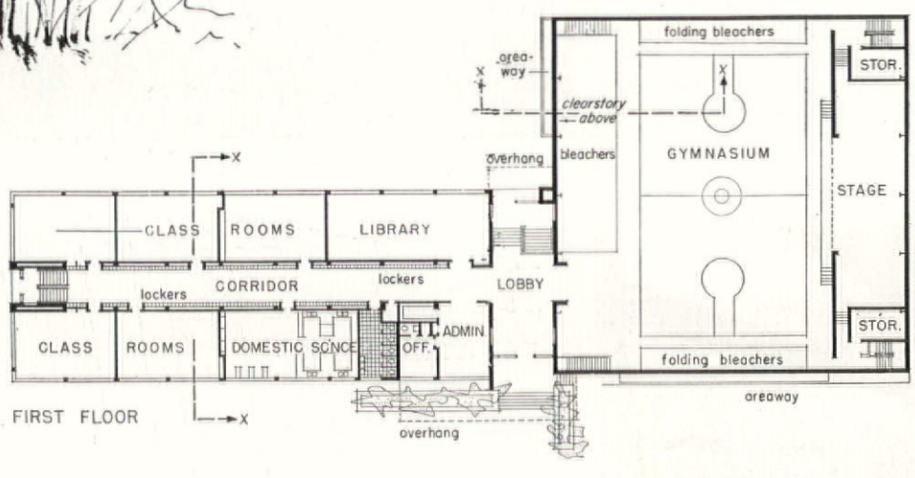
GANSTER & HENNIGHAUSEN, Architects
PETER HAMLIN CONSTRUCTION CO., General Contractor

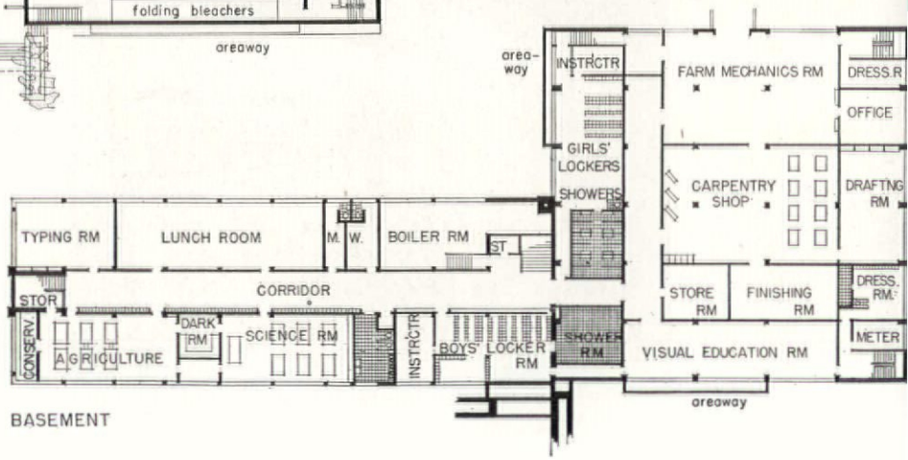
Suffering from insufficient tax revenues, the small farm town of Grayslake, Ill. (pop. 1,200) decided to build and operate its own high school rather than continue to pay the high cost of outside transportation and tuition for its children. The result is this small but handsome building which, upon completion in August, will cost about $345,000 including architects' fee but excluding land, landscaping and furnishings.

Although small (capacity: 450 pupils) the project makes room for a varied curriculum — emphasizing the industrial aspects of an agricultural education — and for integrated expansion. Set in the northeast corner of a 660 ft. square block, the academic wing may be easily extended to the south, the industrial wing to the west. Called "a community high school," it was designed to provide for adult education and recreation as well as child training and thus to become a major factor in the life of the community.

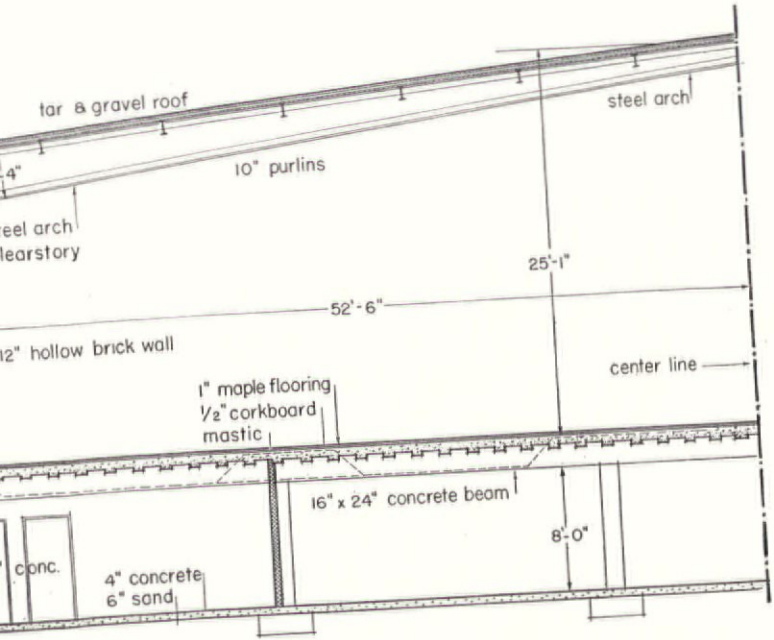
Design of the completed academic wing features cavity brick walls, a dead flat roof with 4 ft overhang, and continuous fenestration. Use of transverse beams with longitudinal roof joists facilitated construction of the strip windows and permitted them to extend to the ceiling for better diffusion of light in the classrooms. Hot water radiant panels heat the building.







urriculum, doubles as farm community center.





GYMNASIUM WING is lighted by clearstory window extending above roof of classroom wing. Rigid steel arches are spaced 17½ ft. on center.

HOUSE at water's edge is open in all directions, relies windbreaks and wide overhangs for protecti

H, Associate

the location of the heater within the same area. The house rests on a reinforced concrete slab poured directly on the sand. A series of wood bents are used as framing. These are placed 10 ft. on center and span about 16 ft.

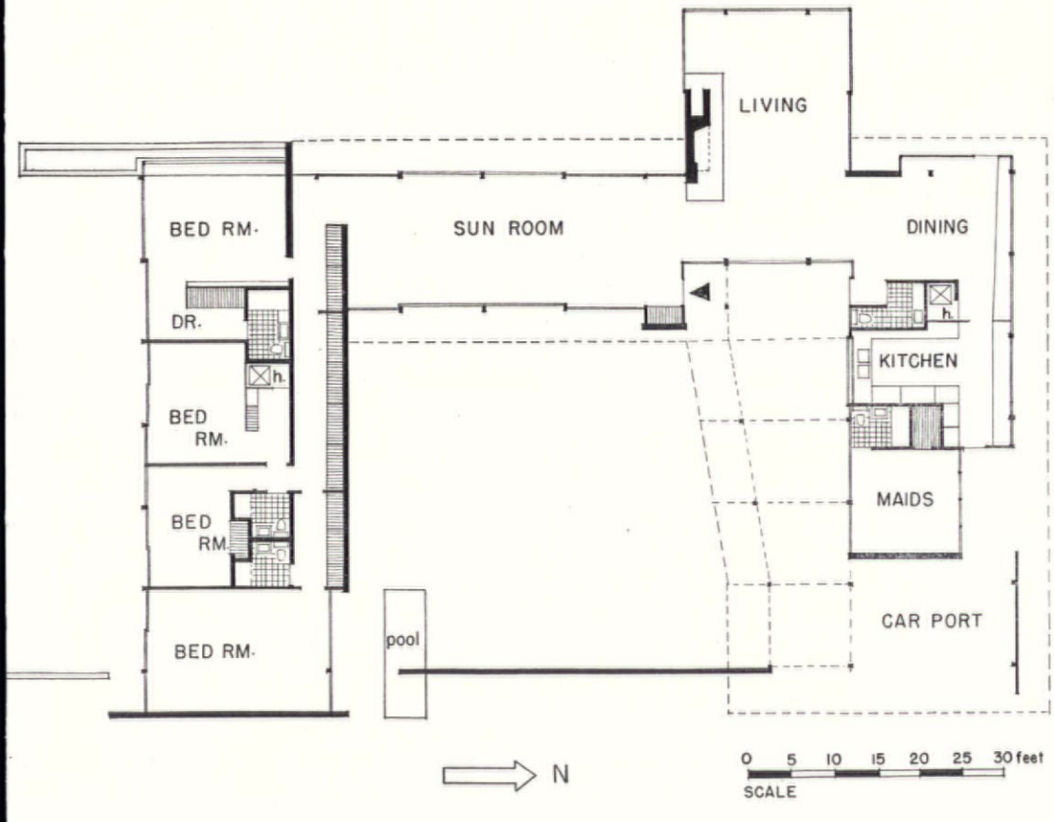
CONSTRUCTION OUTLINE

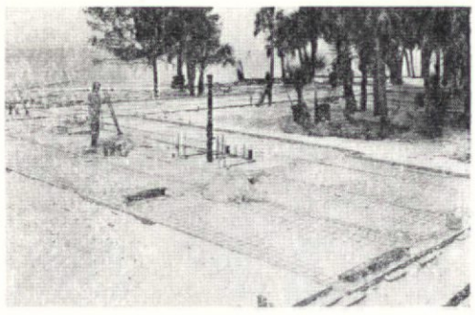
STRUCTURE: Walls—lime block. Ceilings—Acoustone, U. S. Gypsum Co. or strided plywood, Harbor Plywood Corp. ROOF—15 yr. felt, tar covered, The Barrett Co. INSULATION — Johns-Manville. SHEET METAL WORK: Flashing—copper, Revere Copper & Brass Co. Ducts—galvanized steel, American Rolling Mill Co. WINDOWS: Sash—aluminum, ABC Steel Co. Glass—plate, Pittsburgh Plate Glass Co. WALL COVERINGS: Bathrooms—plaster of Linowall, Armstrong Cork Co. PAINTS—Pratt & Lambert, Inc., Inertol Co., Benjamin Moore & Co. Doors—Paine Lumber Co. HARDWARE —Richards-Wilcox Mfg. Co., Schlage Lock Co. Switches —Arrow, Hart & Hegeman Electric Co. Fixtures—Kurt Versen Co. KITCHEN EQUIPMENT: Range and efrigerator—Philco Corp. Fan—Ilg Electric Ventilator Co. HEATING—warm air system, filtering and humidi- ying. Boiler—Butane Liquid gas, Green Fuel Econo- izer Co. Grilles—U. S. Radiator Corp. Regulator— linneapolis-Honeywell Regulator Co. Water heater— ryant Heater Co. Water softener—The Permutit Co.

OOM WING CARRIED INTO HOUSE



LOOKING WEST THROUGH PATIO AND HOUSE TO GULF BEYOND. FOUR GLASS PANELS OF SUN ROOM SLIDE TO ONE SIDE IN CALM WEATHER





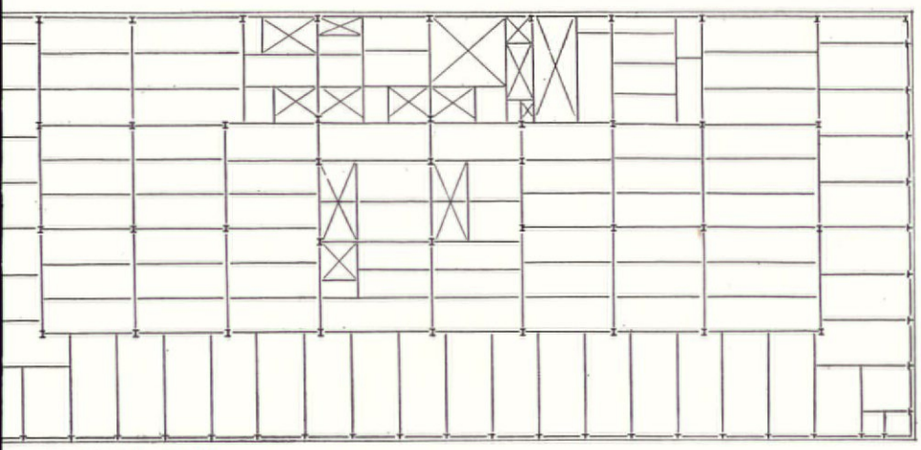
Joseph Steinmetz


445 Park Ave.
21 STORY OFFICE BUILDING
FULLY AIR CONDITIONED
OCCUPANCY JULY 1st 1947
TISHMAN REALTY & CONSTR. CO.

WORK IN PROGRESS!

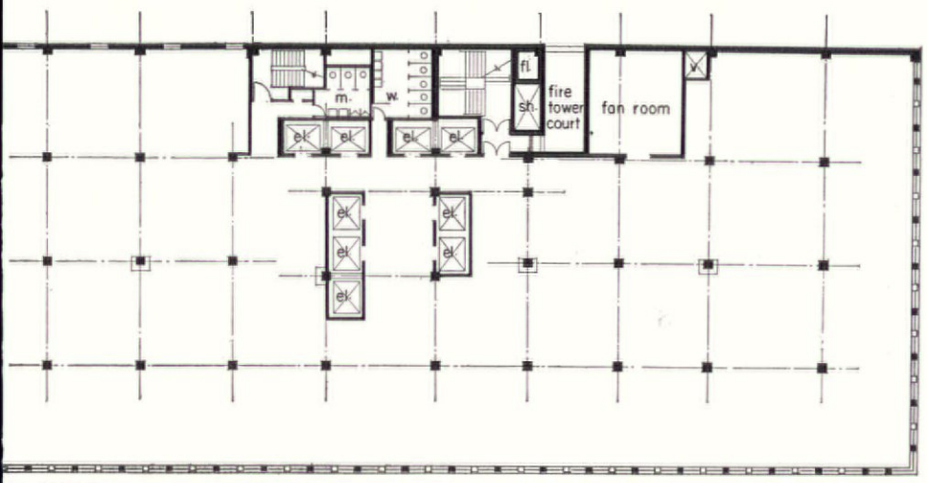
OFFICE BUILDING on New York's swank Park Ave. is planned for large, affluent, long-term tenancy.

TISHMAN REALTY & CONSTRUCTION CO., Owner-Builder
KAHN & JACOBS, Architects
FRED N. SEVERUD, Steel Structure
JAROS, BAUM & BOLLES, Mechanical Engineering
T. FREDERICK JACKSON, INC., Electrical Engineering

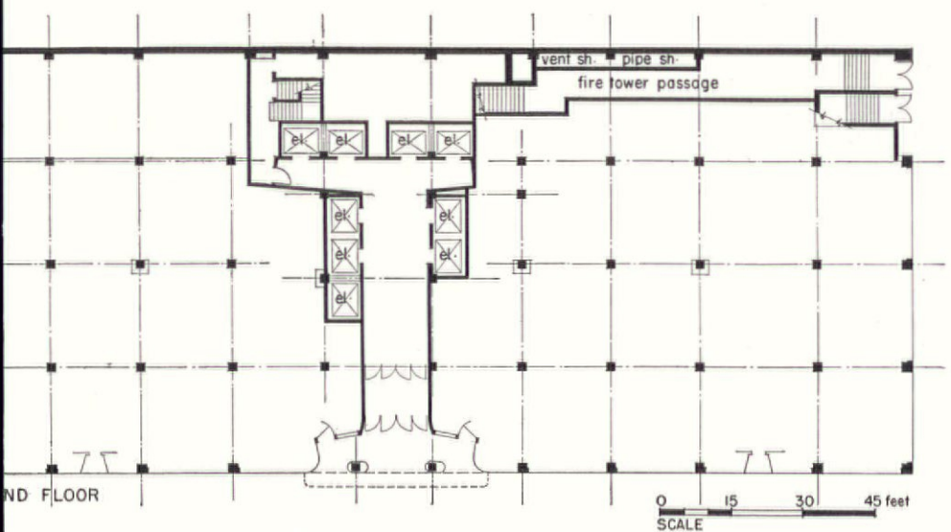


NG OF TYPICAL FLOOR

Relation of lightweight peripheral columns to central core of heavier steel results in unusual framing pattern.



AL FLOOR



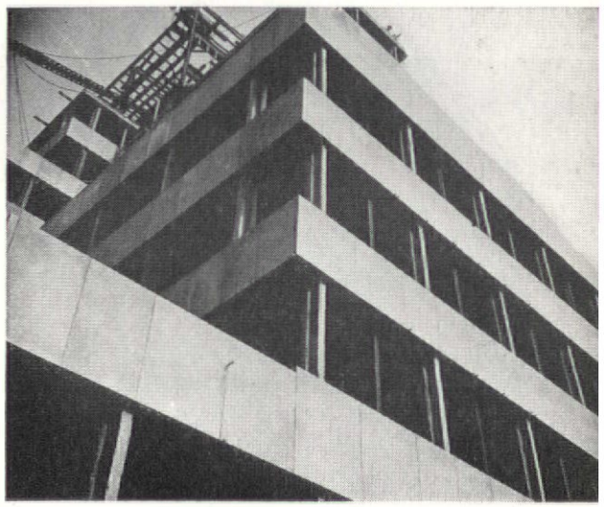
ND FLOOR

Rising in the shadow of the exclusive Ritz Tower, an ornate monument to skyscraper architecture of the twenties, the horizontality of New York's new Tishman Building contrasts sharply with its typical metropolitan surroundings.

When Kahn & Jacobs designed the building, they made two sets of plans which they termed the "Mosaic" and "pre-Mosaic." The latter set was drawn in the expectation that Robert Moses' proposed zoning restrictions would be defeated. They were. As built, the sub-basement contains refrigerating equipment instead of a parking area which the defeated law would have required. Floor space thus was increased by 69,000 sq. ft. Completely air conditioned and scheduled for occupancy about May 1st, space will rent for an average of $5.00 per sq. ft.

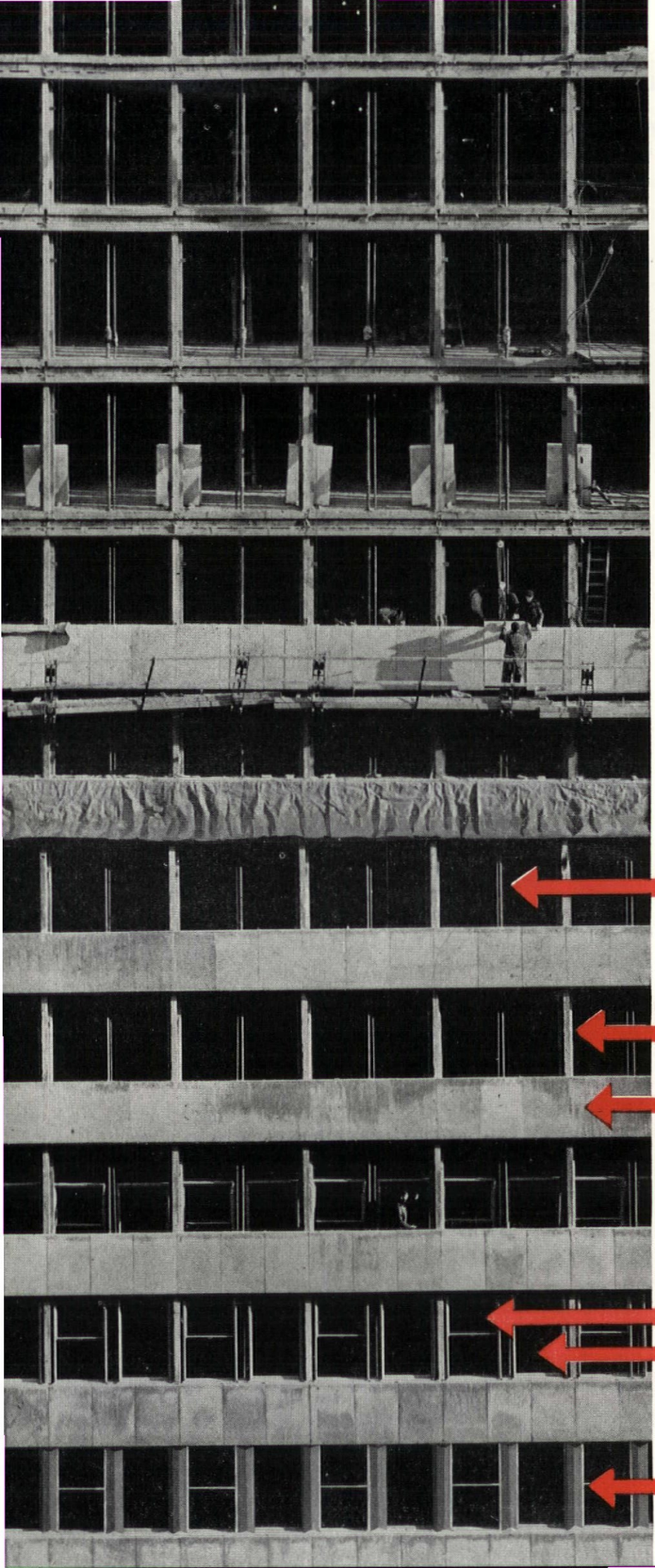
While slender outside columns contribute a certain lightness, heavy masonry facing disguises the true structural pattern of the building in a horizontal counterpart of the still persistent vertical style (FORUM, '46). Though the striking alternation of dark and light strips creates an impression of continuous fenestration, the building appears no more open than the articulated frame of the Portland office building (page 98), wherein pairs of windows are treated as individual units. In further quest of lightness, corner columns have been omitted, angle windows substituted.

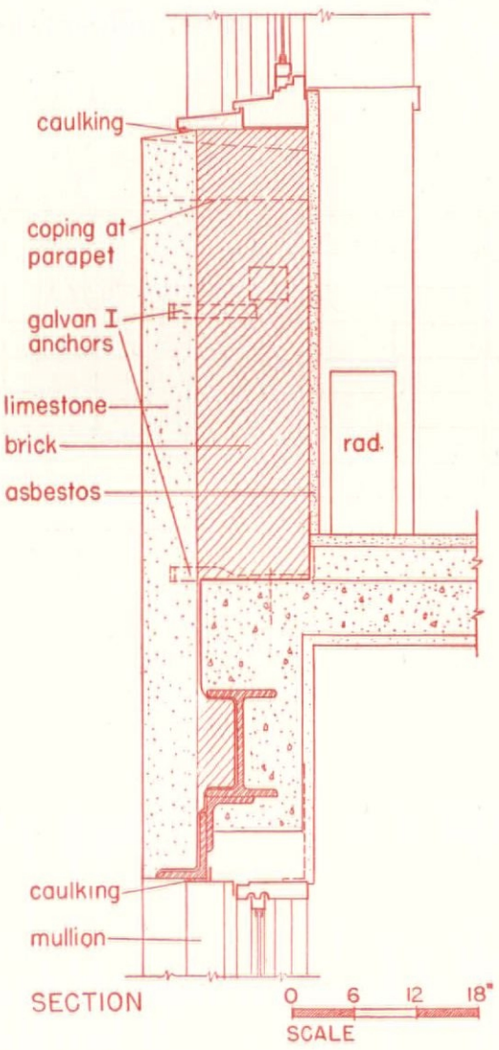
Unless the whole ground floor is leased by a single tenant, it will house six stores and a large restaurant. The rest of the building will be limited to six or seven long-lease occupants, since minimum rental space is one floor.



Photos by Rudolph Leppert, Jr.

Small, close-spaced columns rep





STEAM RISER & RETURN

STRUCTURAL COLUMN

LIMESTONE SPANDREL

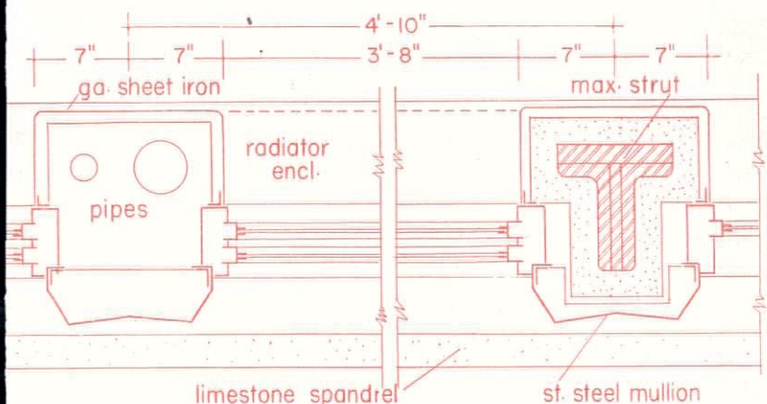
OPERABLE SASH

FIXED SASH

STAINLESS STEEL MULLIONS

ventional heavy steel on outside walls, permit flexible partitioning, practically continuous fenestration.

Struts, comprised of two steel angles forming a T-shaped column are used for the outside wall. These alternate with heating risers and returns which are identically encased to form slender mullions. Mullions are 4 ft. 10 in. on center and 1 ft. 2 in. wide, with 3 ft. 8 in. openings between. The resulting planning module provides two windows per normal office, with variations in partitioning and fenestration combinations both possible and easy. The structure of the outer wall rests on heavy steel beams at the second-floor level to provide a flexible column arrangement on the ground floor, for varying demands of store tenants. Fenestration on the second floor differs from that above. Instead of alternating fixed and double-hung windows between structural columns and heating conduits, this floor omits false columns and has double windows suitable for commercial display.



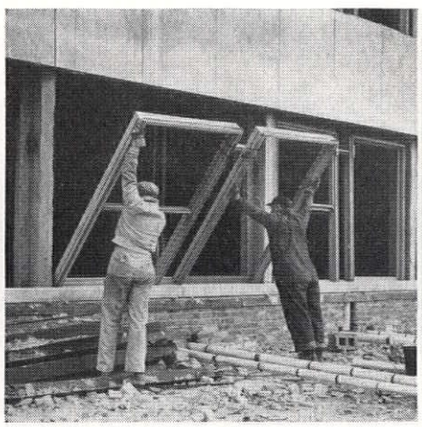
YPICAL WINDOW SECTION

Though heating originally was planned through the air conditioning system, too much space was required for ducts. Consequently, a split system of steam and air was employed. Radiators set between outside columns leave flush interior surfaces. Fan rooms on every floor, opening on an air shaft provide summer cooling. An interior overhead duct system is used for distribution of air sucked in from shaft, conditioned and distributed by ducts to the various offices. Electrical wiring is by means of an under-floor duct system. Main circuits are carried up the columns for future extension to suit the lighting needs of tenants. Conduit line and feeders for telephone service are sealed in floor fill.

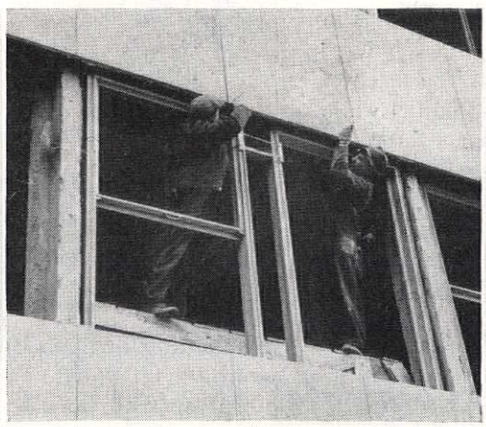
CONSTRUCTION OUTLINE

FOUNDATIONS—steel columns, concrete wall footings to rock; reinforced stone concrete walls. Waterproofing—R.I.W., Toch Bros. STRUCTURE: Exterior walls—limestone spandrels, 8 in. brick walls covered inside from floor to metal window stools with metal radiator enclosures. Interior partitions—concrete block. Columns—steel, fireproofed with Gritcrete concrete, Aerocrete Corporation of America. Structural steel—Bethlehem Steel Co. Floors—marble or terrazzo. Ceilings—cinder concrete arches with suspended ceilings covering air conditioning ducts. ROOF—tile over felt and asphalt, built-up. SHEET METAL WORK: Flashing and gutters—copper, Revere Copper & Brass Co. Ducts—galvanized iron. INSULATION—Fiber-Glas, Owens-Corning Fiber-Glas Corp. WINDOWS: Sash—Superior type, S. H. Pomeroy Co. Glass—plate. ELEVATORS—Otis Elevator Co. WALL COVERINGS: Vestibule and lobby—marble. WOOD AND METAL TRIM: Trim—hollow metal, Atlantic Metal Products, Inc. Exterior doors—stainless steel. Entrance door—Herculite glass, Pittsburgh Plate Glass Co. HARDWARE—Schlage Lock Co. and Oscar C. Rixson Co. PAINTS—The Benjamin Moore Paint Co. ELECTRICAL INSTALLATION: Wiring—A.C., rigid conduit. PLUMBING FIXTURES—Crane Co. Branch wastes and vents—cast iron and galvanized. Water pipes—brass. HEATING—steam convectors. AIR CONDITIONING—Carrier Co. system. Radiators—American Radiator-Standard Sanitary Corp.





PED COLUMN (left) flanked by heating conduits. Both will be masked as cal mullions. Coupled fixed and double-hung sash is put into place.





PAIR OF WINDOWS (left) is installed between outside columns. Like columns, gap between is covered with crimped, prefabricated, stainless steel facing.

WORK IN PROGRESS!

OFFICE BUILDING initiates prefabricated aluminum facing

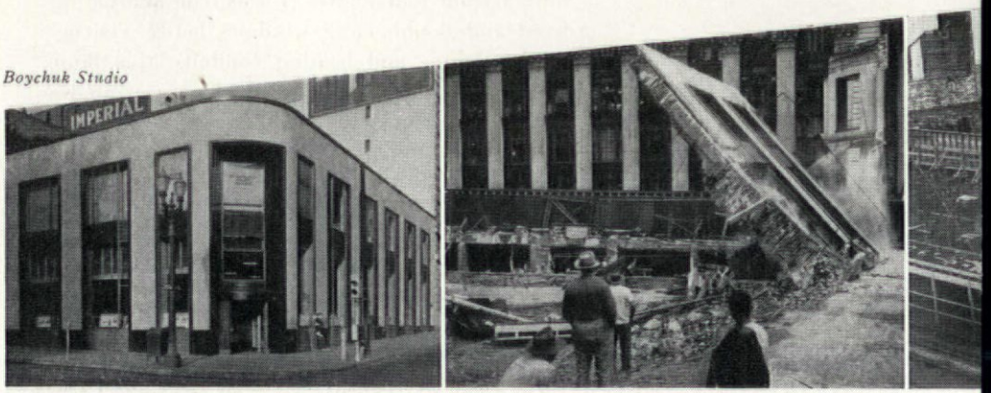
EQUITABLE SAVINGS & LOAN ASSOCIATION, Owner
PIETRO BELLUSCHI, Architect
ROSS B. HAMMOND CO., Contractor

This twelve-story bank and office building now going up in the heart of Portland's financial district has the distinction of being the first building of its type erected in that city in the last twenty years. Its architect, convinced that such facing materials as brick, stone and tile belong to purely imitative architecture and are simply anachronistic when applied to a modern frame structure, has devised a neat and successful exterior treatment combining cast and rolled aluminum. He looks on the skyscraper and office building as strictly American building types that have long needed a style of their own. Steel and reinforced concrete made them possible. Mass production and prefabrication are used anyway, and can make them better looking. It is logical that with these convictions Architect Belluschi in collaboration with Contractor Hammond should choose metal as the ideal material for prefabricated surfaces. Aluminum, until a short time ago unavailable for wholesale use in building is now plentiful and more suitable than ever, thanks to the development of various new alloys.

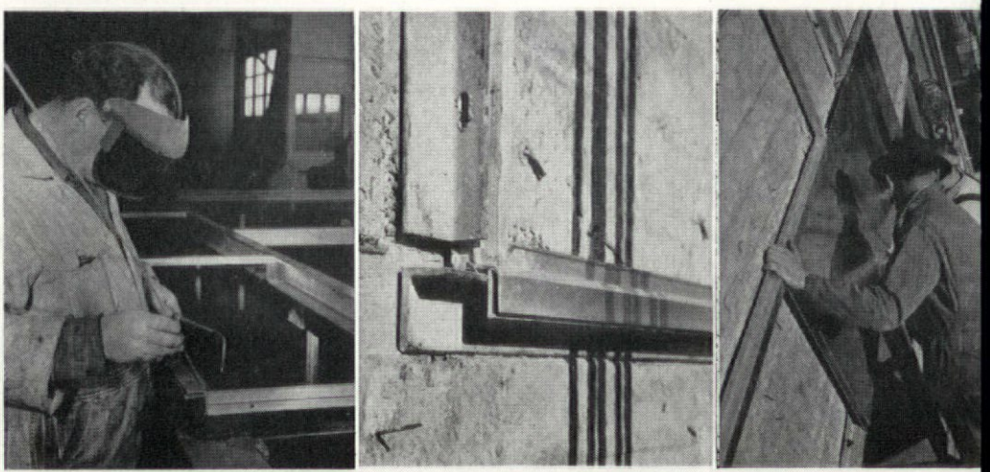
Disregarding the current tendency to stress the horizontal by introducing alternating tiers of glass and facing material, the architect in this case plays up the frame to its fullest degree, subordinating fenestration to it. Rather than the solid or masked spandril, Belluschi has introduced three unobtrusive cast aluminum panels under each window. Facing on vertical and horizontal structural members is rolled aluminum, seemingly uninterrupted.

The building occupies half a city block, falls slightly short of the municipal height restriction but avoids bulky columns on the lower floors and consequently gains in work space. The first two floors occupy the entire lot (100 x 200 ft.) while the setback at the third floor rear reduces the structure to 62 ft. in depth above this level.

Boychuk Studio

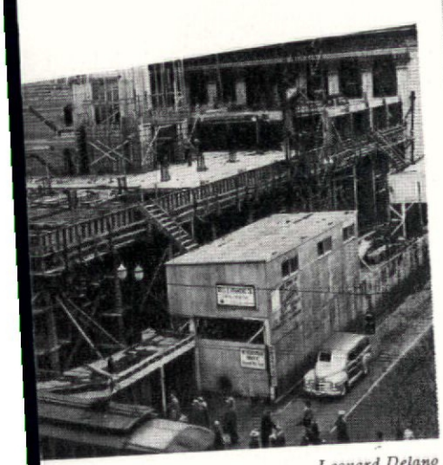


EXISTING TWO-STORY BUILDING (LEFT) WAS DEMOLISHED (CENTER). PREPARATION O SITE FOR NEW CONSTRUCTION TOOK SIX MONTHS. REINFORCED CONCRETE WAS POURE FLOOR BY FLOOR. THIRD FLOOR IS COMPLETED (RIGHT).



WORKER (LEFT) WELDS PREFABRICATED FRAME FOR WINDOW-PANEL UNIT AT FACTOR CLIPS (CENTER) ARE ATTACHED TO CONCRETE FRAME TO RECEIVE ROLLED ALUMINU FACING. FACING IS PUT IN PLACE (RIGHT).

forced concrete frame.



Leonard Delano

ODEL (RIGHT) DEMONSTRATES TYLISH, ARTICULATED CHARACTER CHIEVED THROUGH AN UNCAMOU-LAGED STRUCTURAL PATTERN

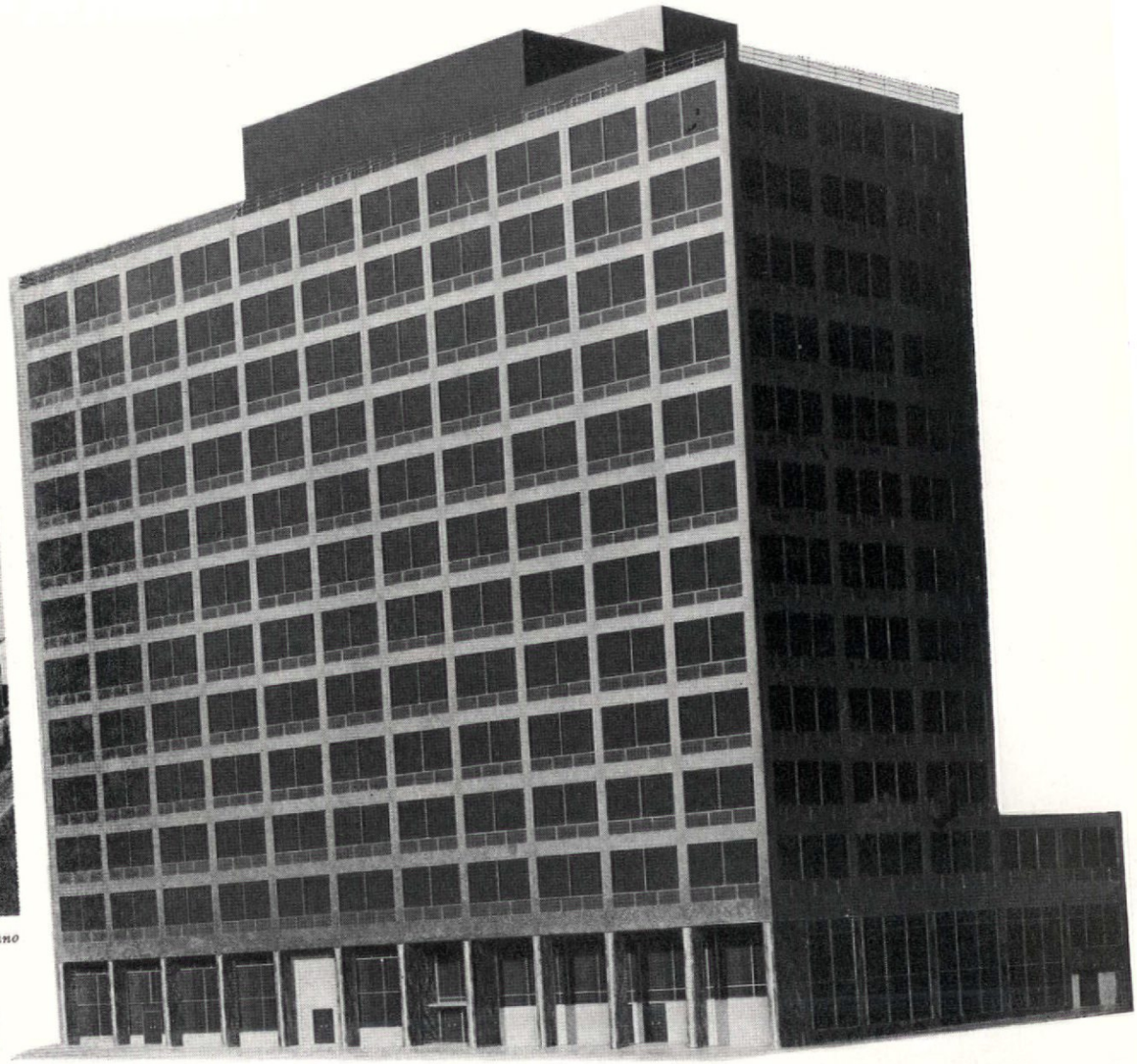
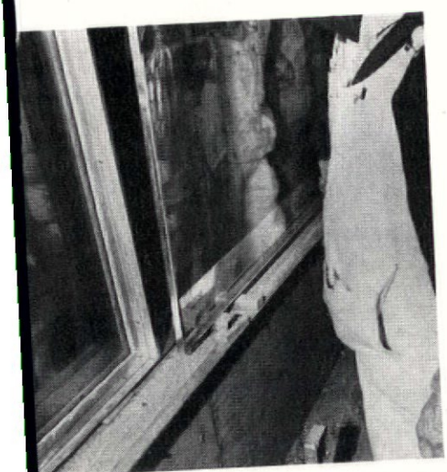
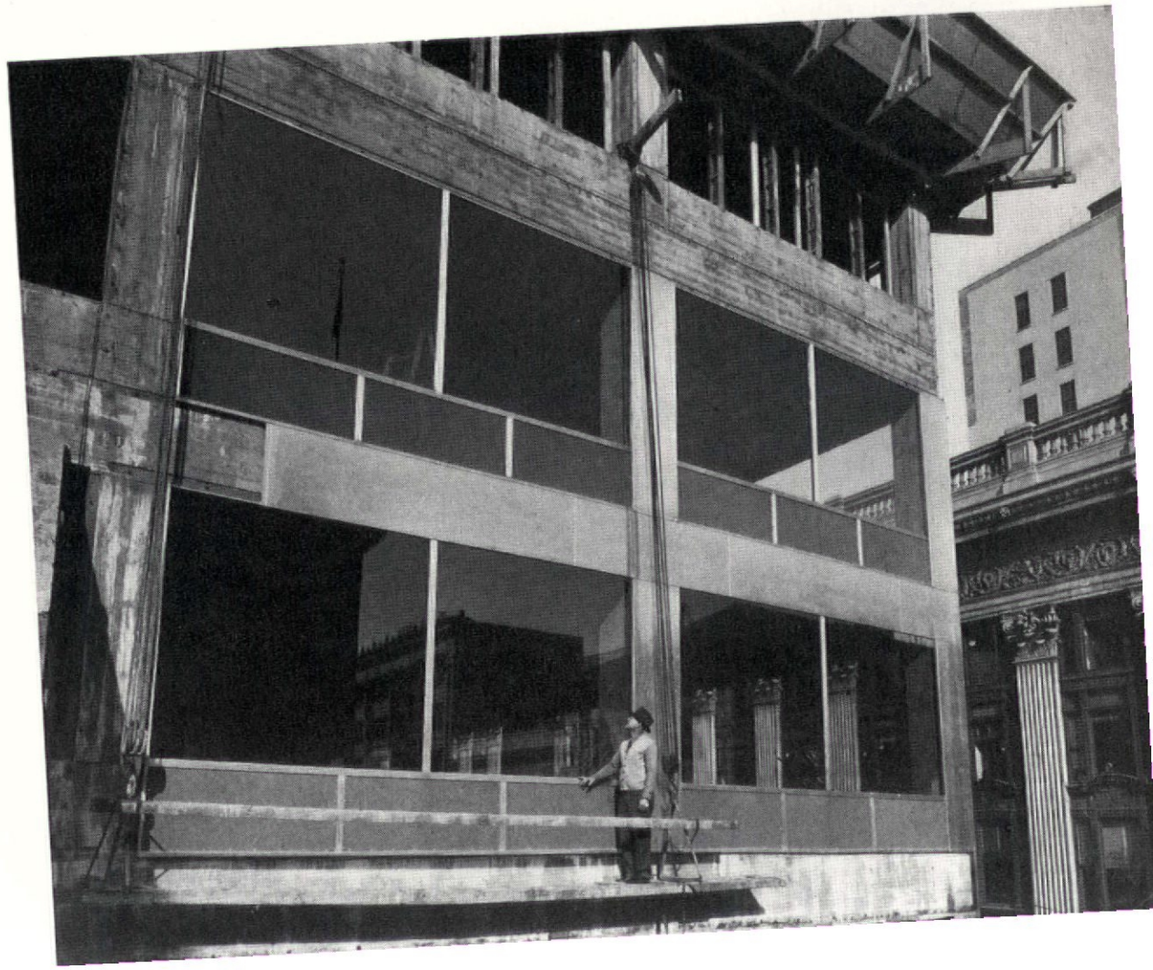


Photo Art



OUBLE GLAZING IS SET INTO PREFAB-ICATED ALUMINUM FRAMES FROM HE INSIDE



ANELS AND FACING IN PLACE ON OWER FLOORS. ROUNDED SECTIONS F SHEET ALUMINUM FORM CORNERS

Reverse cycle air conditioning and an ingeniou

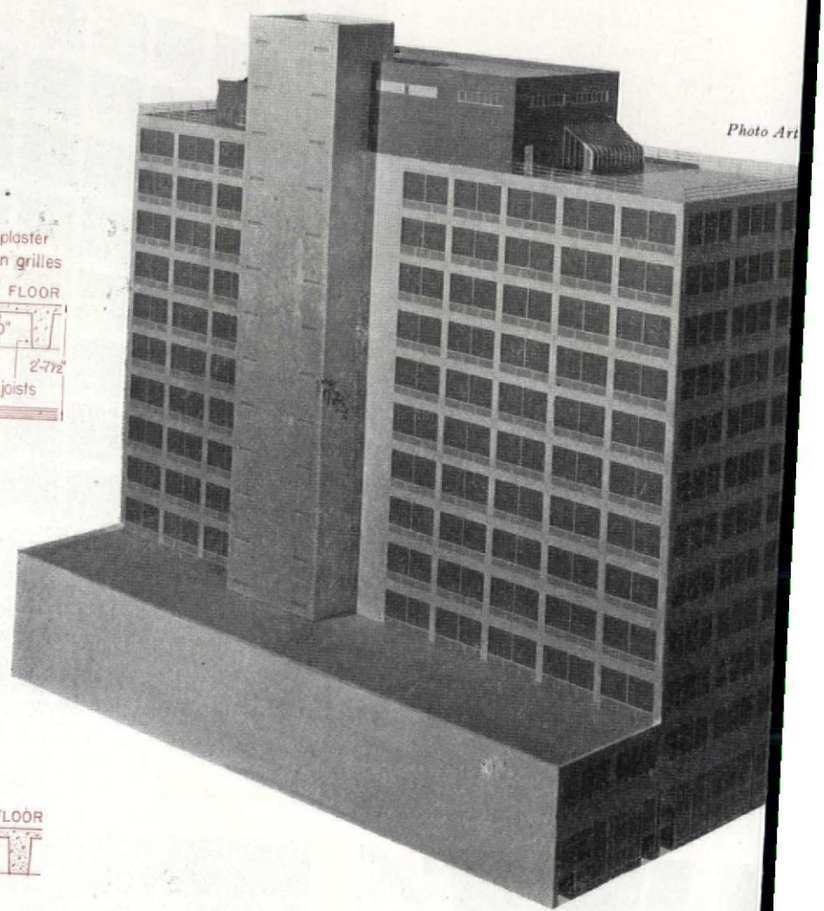
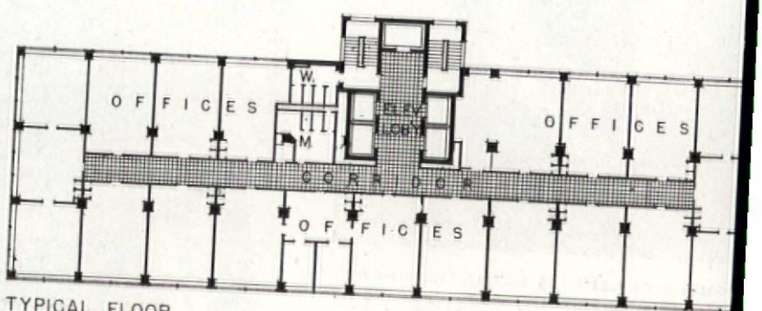
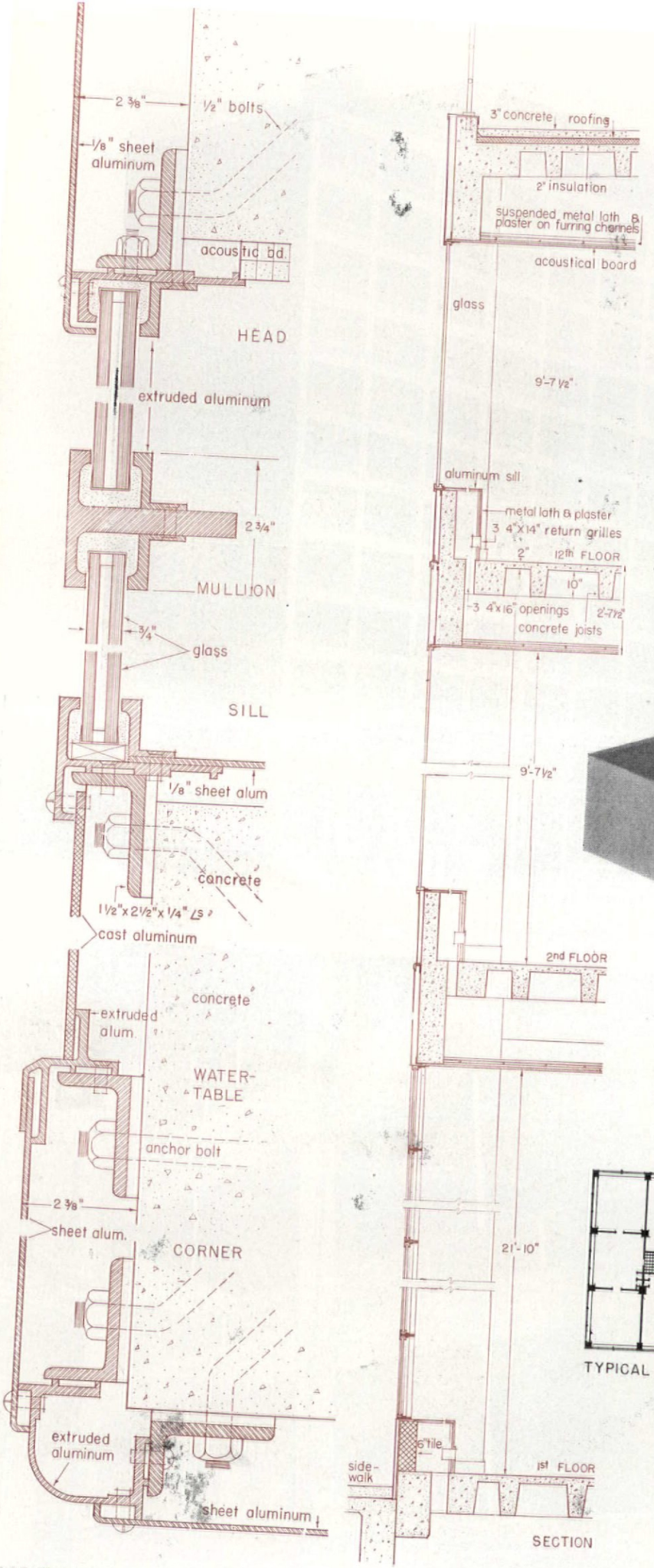


Photo Art

UNIFORM FENESTRATION IS USED
ON ALL FOUR SIDES OF BUILDING



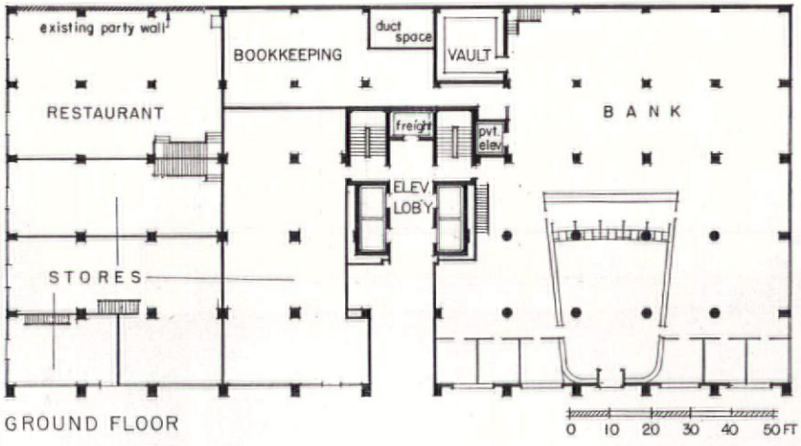
TYPICAL FLOOR



xible lighting system boost the value of interior space.

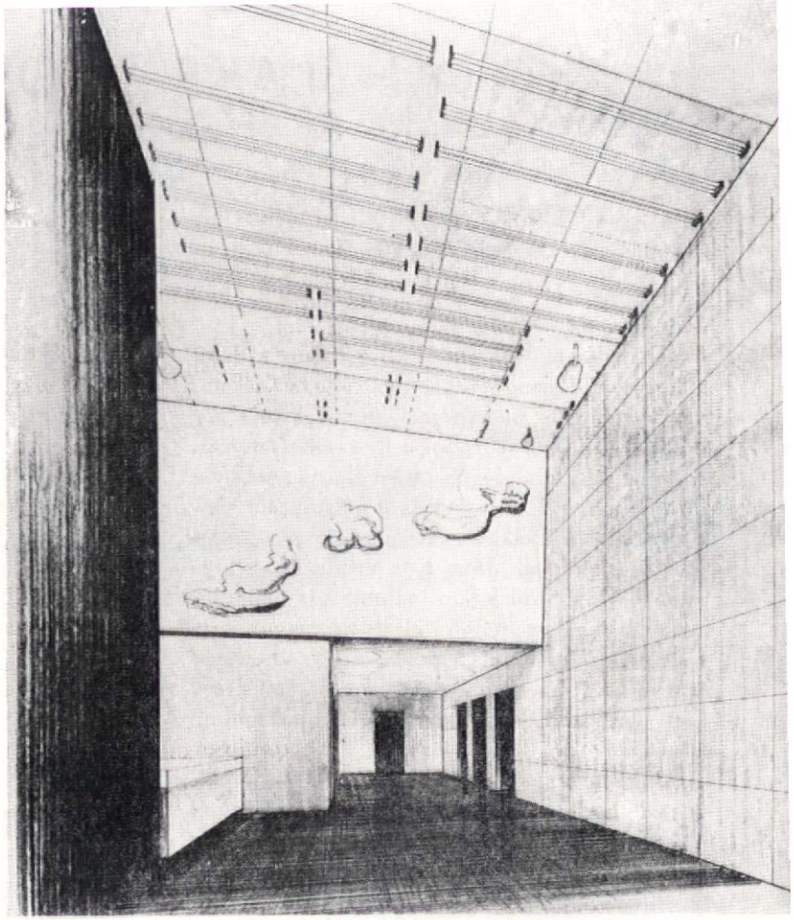
Two of the building's outstanding features are its lighting and air conditioning systems. The former is comprised exclusively of exposed, low voltage, cold cathode tubes in 8 ft. lengths. Particularly adaptable because of low surface brightness, the tubes span between sockets under a bare ceiling which acts as a reflector. The wiring plan is a continuous, parallel system of ceiling gutters at 8 ft. intervals, which permits a highly flexible installation either aligned with or at right angles to the windows. The overall effect, which in quality closely resembles daylight, has proved important from the standpoint of rentability, making inside offices practically as desirable as outside space. By drilling through the concrete slabs, the gutters can be tapped for outlets at any desired point on the floor directly above more easily and less expensively than with conventional under-floor conduits.

Electrically powered reverse cycle heating and cooling is used for year-round air conditioning. Except for the fire escapes at the rear, the building has no operable openings. Complete air conditioning was made possible by prevailing economy of hydro-electric power in the region and by the use of hermetically sealed, double glazed windows. Since the Portland climate is comparatively mild, the size of the reverse cycle equipment was determined by the summer load, or amount of heat transmitted from the outside, reducing the size of the heating-cooling plant as well as operating costs. The method of air conditioning, an electronic device, cleanses as well as heats and cools. Based on a heat pump system (FORUM, Nov., '46), water in this case furnishes both heat and cold working through a cold water well, a warm water well and a discharge well.



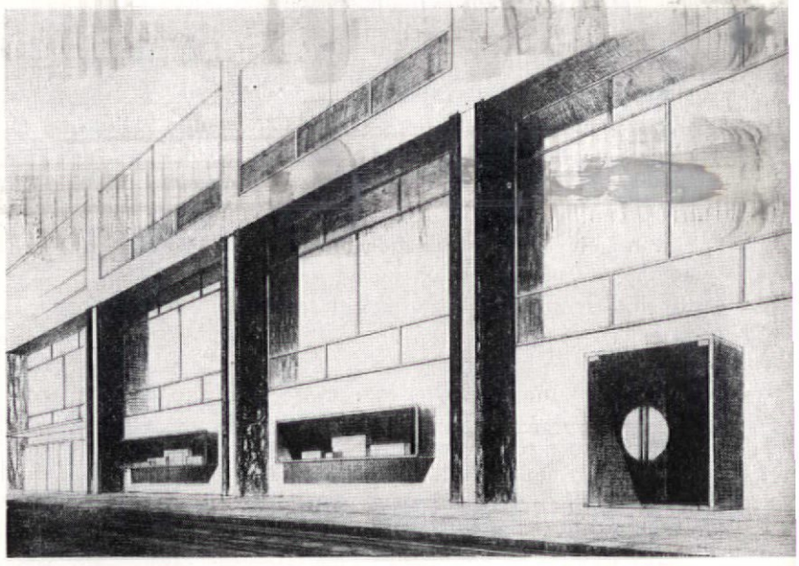
GROUND FLOOR

FIRST-FLOOR PLAN SHOWS RATIO OF BANKING AND RENTAL SPACE. STORES VARY IN FLOOR AREA FOR DIVERSE MERCHANDISING NEEDS

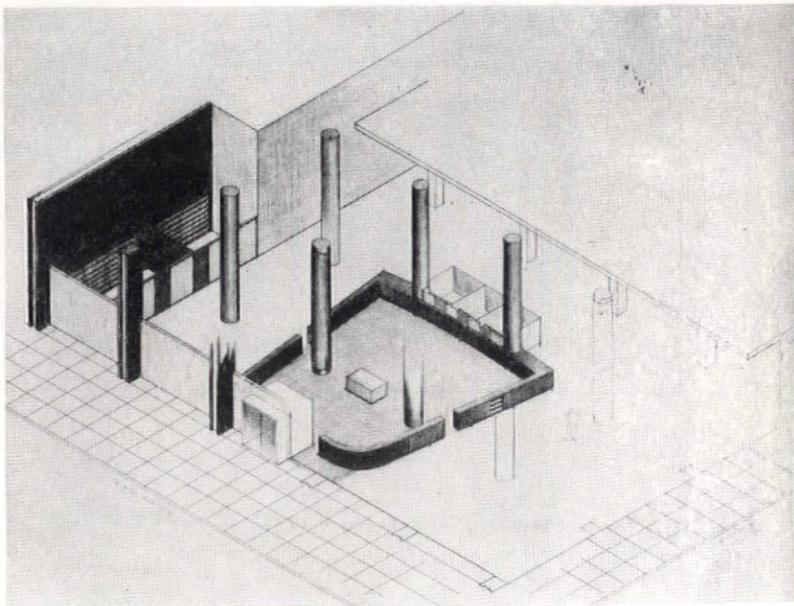


EXPOSED CEILING TUBES ADD INTEREST AS WELL AS GOOD LIGHT

GROUND FLOOR SETBACK PERMITS PROJECTION OF DISPLAY CASES



CUTAWAY SHOWS CONCENTRATED PUBLIC AREA AT BANK ENTRANCE



WORK IN PROGRESS!

LAKE SHORE HOUSE has glass walls to exploit view, screened porches and terrace for sleeping, lounging and dining.

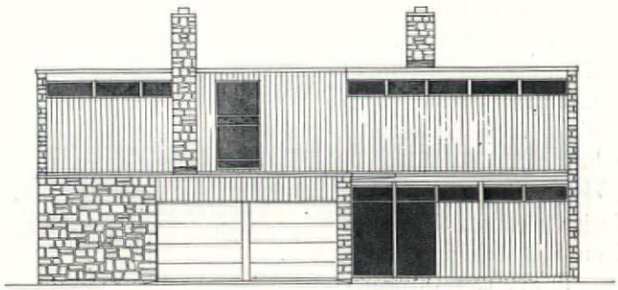
GEORGE FRED KECK, WILLIAM KECK, Architects
J. R. JONES CO., General Contractors

Departing from their usual "solar" plan (with all major rooms facing south), the brothers Keck are now completing this project on the lake shore north of Chicago. This house faces east—its size, shape and location being rather sharply set by a lot whose principal asset was a magnificent view out over Lake Michigan. However, the plot is narrow and, although deep, had only a small area atop the bluff which was suitable for building: Neighboring houses were close to the property line. These limitations led naturally to a house of two stories, placed quite near the dead end street, with north and south walls largely blind and all principal rooms facing the lake. Except for ventilating louvers, this east wall is entirely of double sealed plate glass. The masonry end walls project to enclose a continuous screened porch across the second floor and a continuous terrace (screened at either end) across the first.

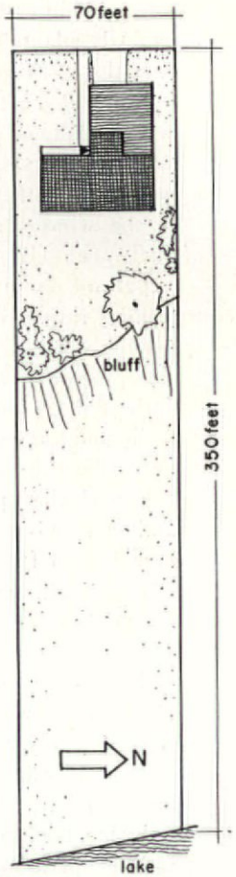
Structurally, the house has several interesting innovations which save money or bypass material shortages. Plaster, for example, has been held to an absolute minimum. The masonry end walls (of cavity construction, with a core of foamed glass brick) are left exposed; shop-fabricated storage units substitute for partitions in many places; and the first-floor ceiling joists with their solid bridging are left exposed. There is panel heating in both floors—in a slab on the ground and in an ingenious plank-and-concrete sandwich on the second (see detail, facing page). Since windows throughout are glazed with sealed double glass, the Kecks have wisely chosen to fix all glass and rely entirely upon louvered panels for ventilation.

CONSTRUCTION OUTLINE

FOUNDATION—reinforced concrete. STRUCTURE: Exterior walls—stone cavity, Foamglass insulation, Pittsburgh-Corning Corp., metal bonding ties; wood walls standard. Floors—wood or cement. ROOF—tar and gravel. INSULATION—Pittsburgh-Corning Corp. and U. S. Gypsum Co. FIREPLACE: Damperm—Donley Bros. SHEET METAL WORK: Flashing—copper, Revere Copper & Brass Co. WINDOWS: Glass—Thermopane, Thermopane Co., Div. of Libbey-Owens-Ford Glass Co. FLOOR COVERINGS: Bedrooms, halls, kitchen and bathrooms—linoleum and tile, Armstrong Cork Co. WALL COVERINGS—stone and plywood, U. S. Plywood Corp. Bathrooms—Carrara glass, Pittsburgh Plate Glass Co. PAINTS—Pratt & Lambert, Inc. DOORS—Roddis Lumber & Veneer Co. Garage doors—Barber-Colman Co. ELECTRICAL WIRING—conduit, General Electric Co. KITCHEN CABINETS—St. Charles Mfg. Co. Ventilating fan—General Electric Co. BATHROOM EQUIPMENT—Kohler Co. PLUMBING: Soil and vent pipes—cast iron. Branch lines—galvanized iron. HEATING—hot water radiant system. Pipes—A. & M. Byers Co. Boiler—Crane Co. Regulators—Johnson Service Co. Water heater—gas.

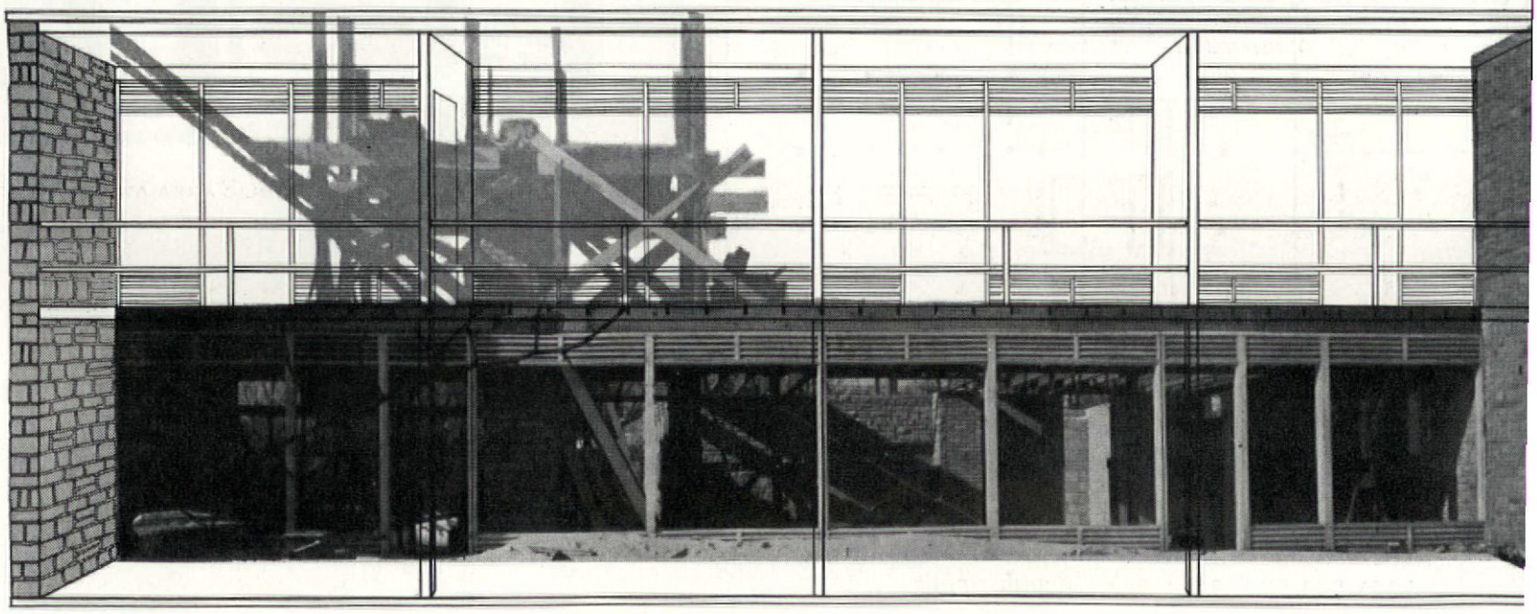


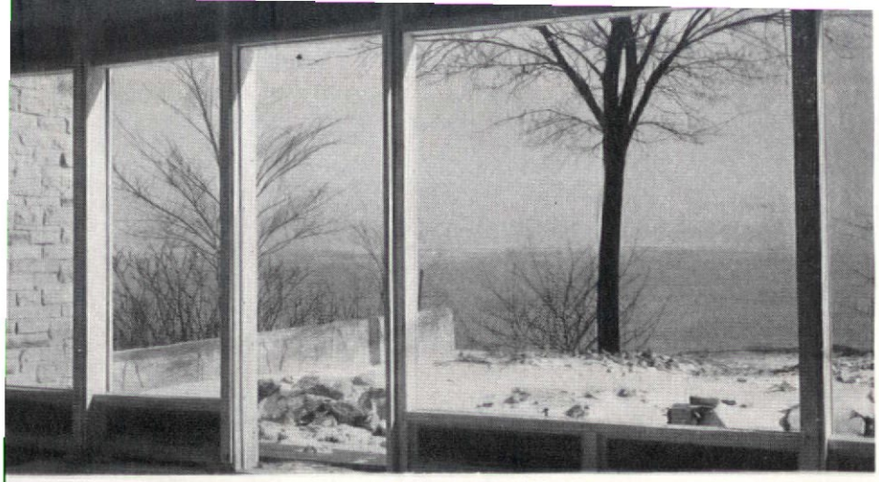
THE STREET FRONT IS LARGELY CEDAR SIDING



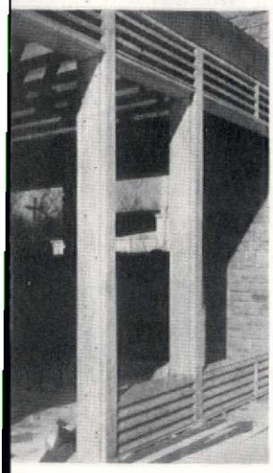
SITE PLAN

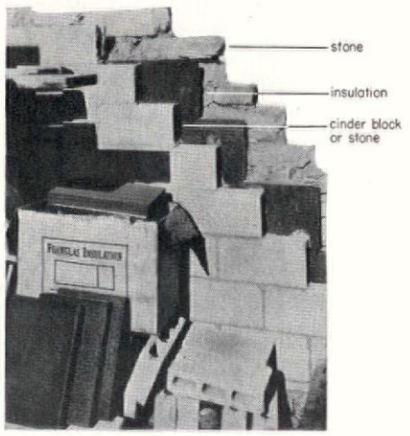
SECOND FLOOR PORCH IS SCREENED, DIVIDED FOR PRIVACY. FIRST FLOOR SCREENED PORCHES OPEN OFF STUDY AND DINING AREAS



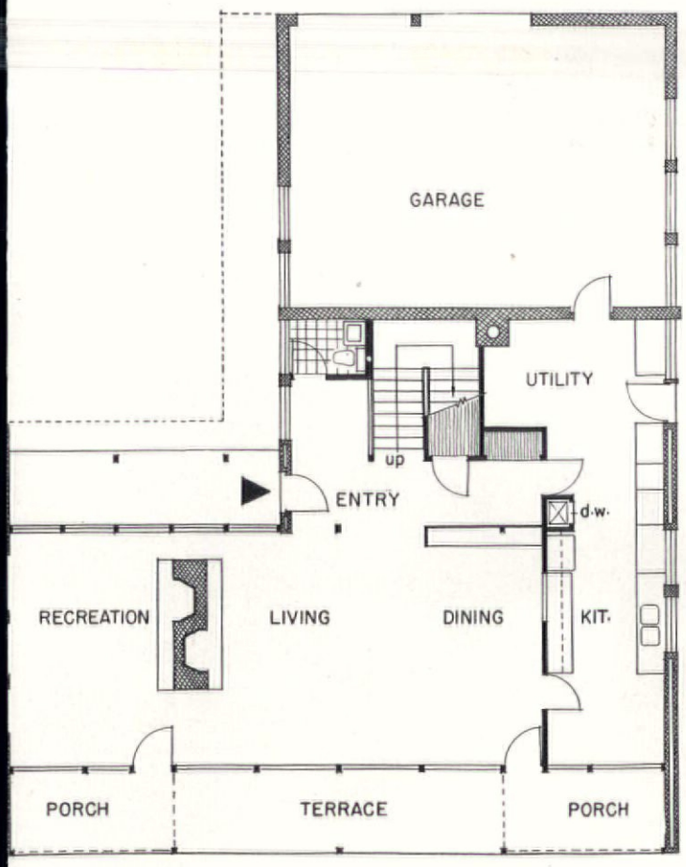


LASS WALL OF LIVING ROOM COMMANDS MAGNIFICENT VIEW OF LAKE

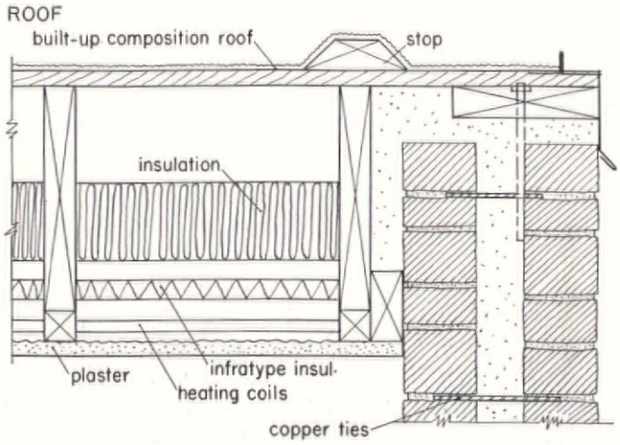


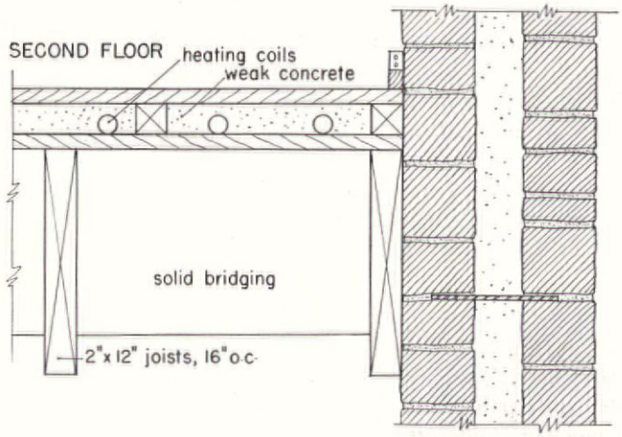


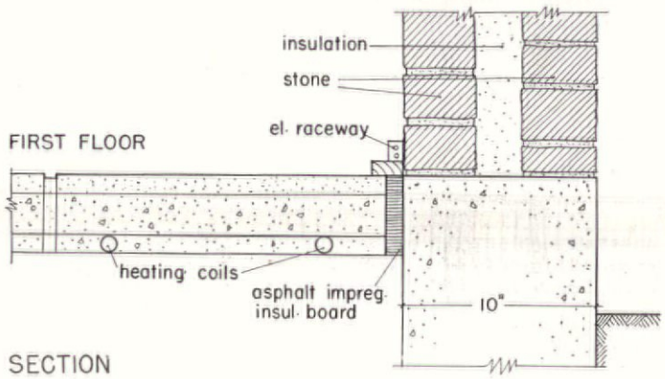
LL GLASS IS PERMANENTLY FIXED: LOUVERS PROVIDE VEN-
LATION. NOTE CAVITY STONE WALLS WITH INSULATING CORE.



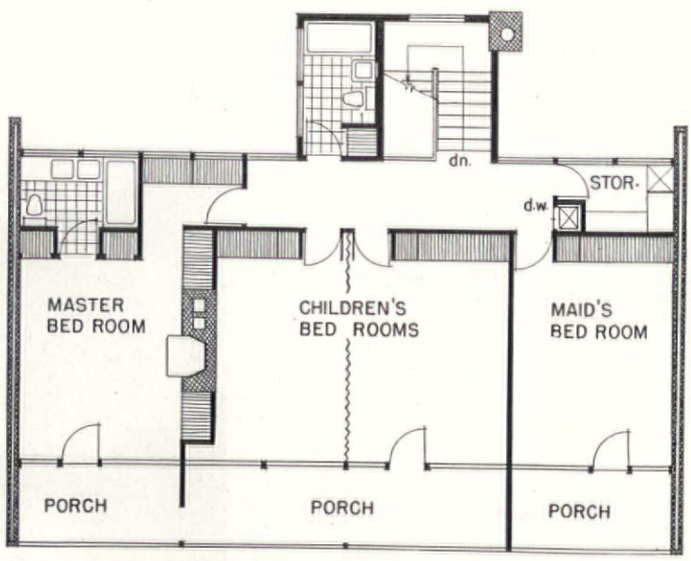
IRST FLOOR







SECTION



SECOND FLOOR

0 5 10 15 20 25 feet
scale

WORK IN PROGRESS!

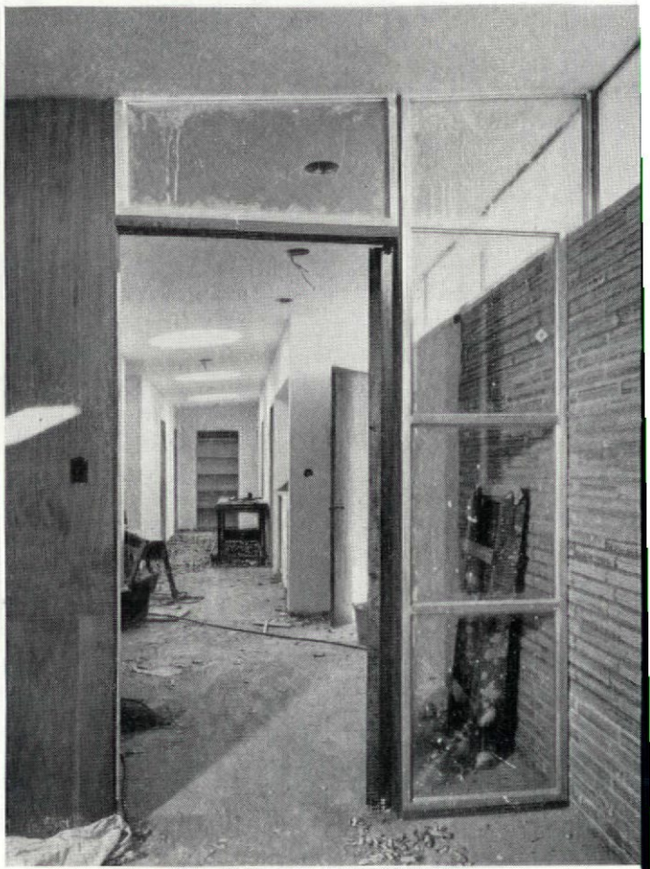
SUBURBAN CLINIC in Seattle is a "branch" of a central instituti

CHIARELLI & KIRK, Architects

RIPLEY & CHOLAAS, Contractors

A suburban branch of a large central institution, the new Crown Hill Medical and Dental Clinic in Seattle is the first of a group which will ultimately extend to all suburbs. Staffed by two doctors and a dentist and served by specialists from the center the new clinic thus will offer as full a service as is available downtown. The plan reflects these requirements: For the doctors, it provides rooms for waiting and reception; examining and consultation; minor surgery, physiotherapy, X-ray, darkroom and laboratory. A self-contained unit for the dentist provides waiting and reception room, two operating rooms, laboratory and darkroom. Both suites share a common street entrance and a carport at the rear for patients unable to walk.

The structure is a straightforward expression of the cruciform plan. The building rests on a single concrete mat, with room-zoned radiant heating coils embedded in it. Framed in a shallow inverted gable, the roof design reduces structural work to a minimum.

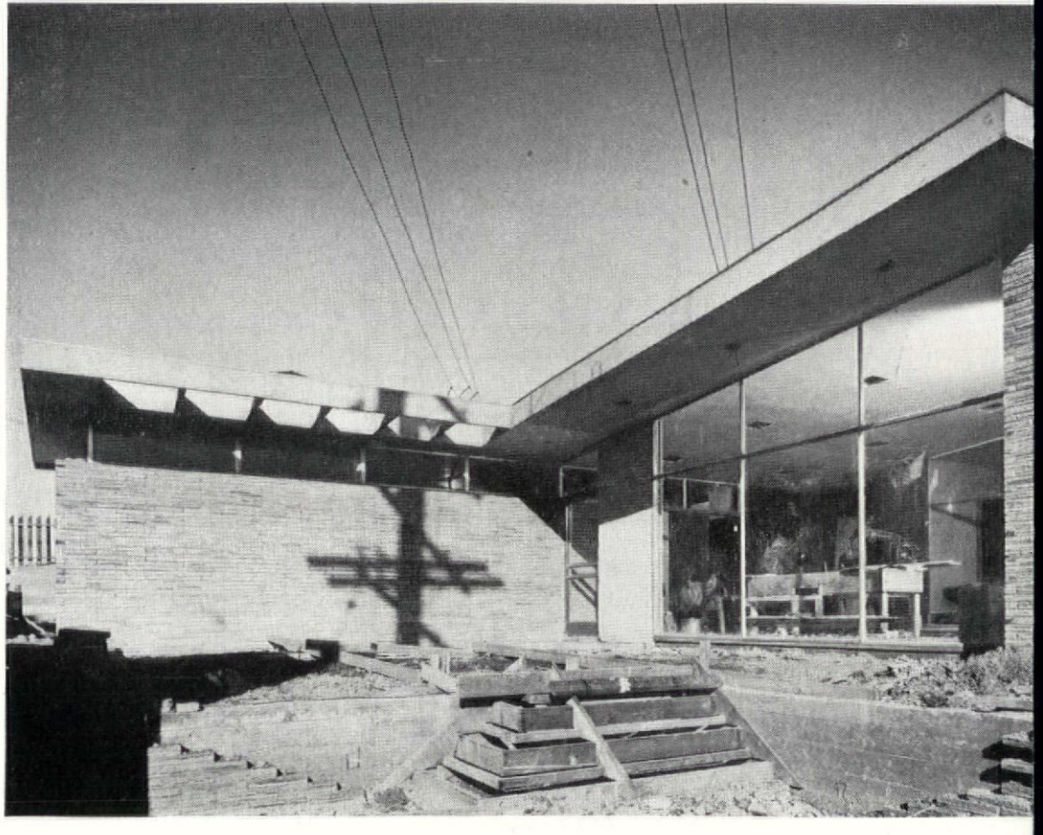


TRANSVERSE CORRIDOR IS LIGHTED BY TRANSOMS, SKYL

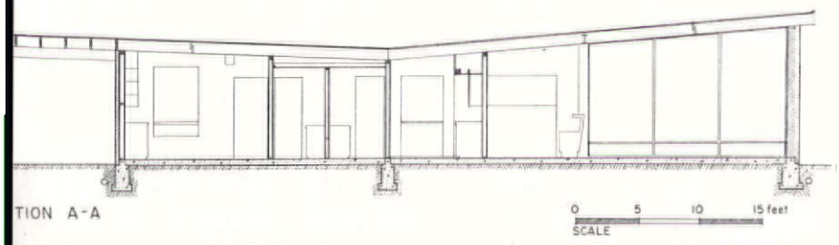
CONSTRUCTION OUTLINE

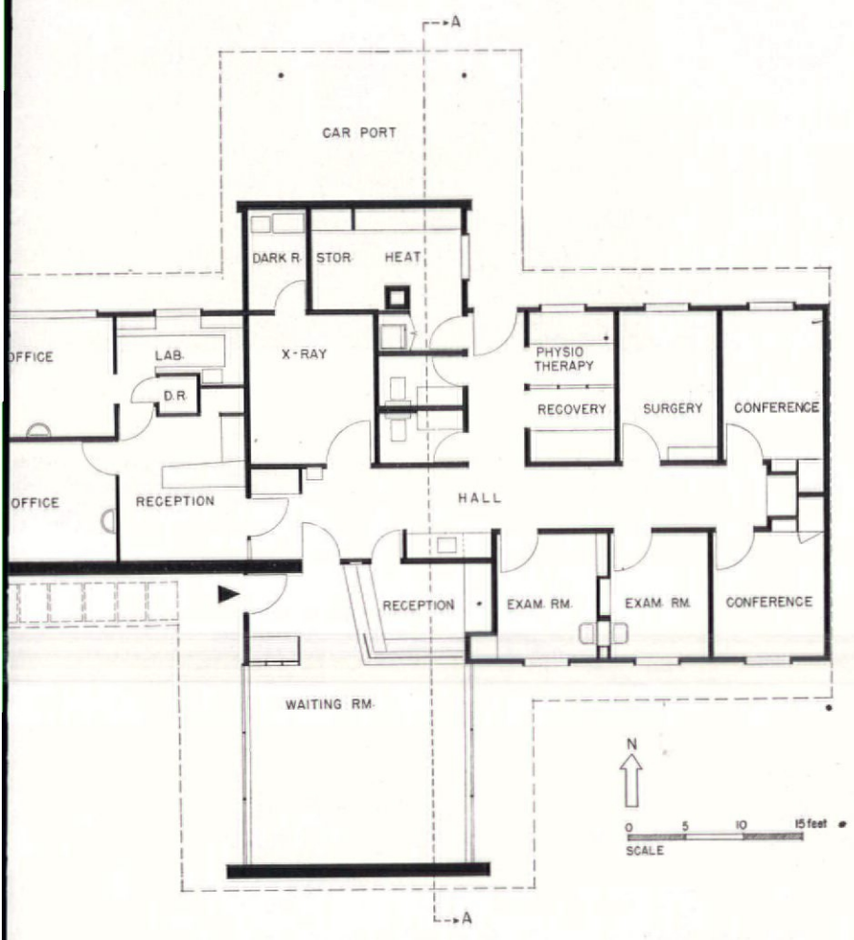
STRUCTURE: Exterior walls—13 in. brick, outside stucco finish; inside—2 x 4 in. studs, 16 in. o.c., sheathing, plaster and hardwood paneling. Floors—concrete slab; cement finish, Kemiko, Harry Rohloff & Co. ROOF—built-up. SHEET METAL WORK: Flashing and ducts—26 gauge galvanized iron. INSULATION: Roofs—2 in. rockwool blanket, Johns-Manville. Sound insulation—1 in. Cabot Quilt, Samuel Cabot, Inc. WINDOWS: Sash—aluminum. Glass—crystal sheet and plate. FURNITURE — Wisconsin Chair Co. HARDWARE — satin finish aluminum, Schlage Lock Co. Fixtures—recessed chrome, Curtis Companies, Inc. PLUMBING: Fixtures—Crane Co. Water closet connections—Sloan Valve Co. Hot and cold water pipes—copper tubing. HEATING—radiant hot water system, steel pipes, oil burner automatic controls, zoned to each room. Boiler and valves—Crane Co. Oil burner—Century Engineering Co. Regulator—Sarcotherm, Minneapolis-Honeywell Regulator Co. Water heater—National Steel Corp.

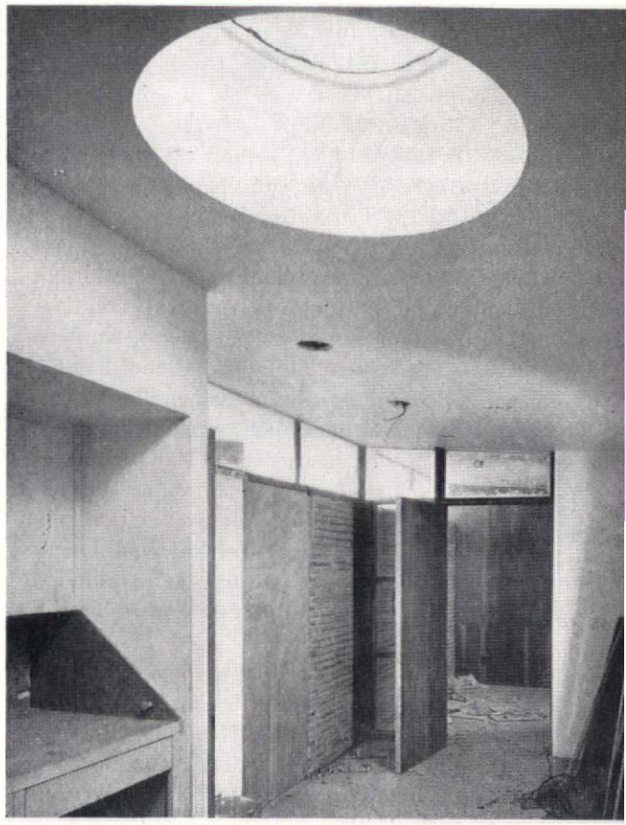
LOW ROOF LINES AND ROMAN BRICK END WALLS MINIMIZE IT'S INSTITUTIONAL ATMOSF



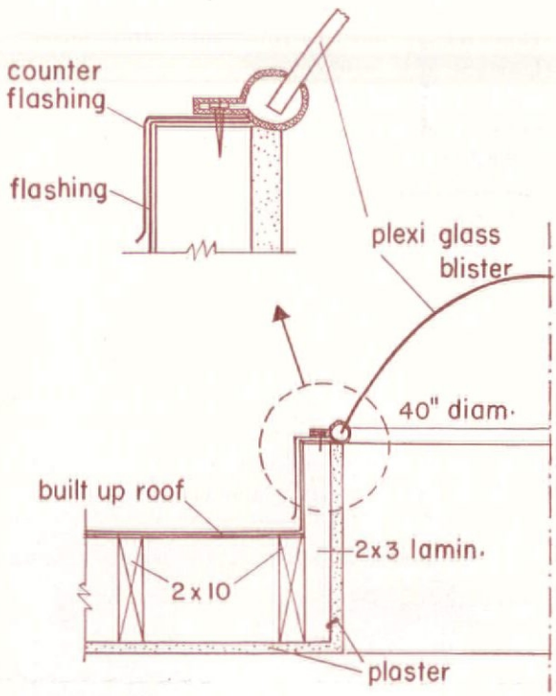
ilar decentralized service will ultimately cover entire city.







ASTRODOMES FOR B-29 BOMBERS—SURPLUS PROPERTY FROM WORLD WAR TWO—HAVE BEEN USED FOR THREE SKYLIGHTS IN TRANSVERSE CORRIDOR



SECTION

SS, WALNUT, BRICK AND PLASTER WILL MAKE WAITING ROOM DOMESTIC, COSY



WORK IN PROGRESS!

DEPARTMENT STORE, garage and warehouse, built as a u

permit a mechanized system of stock handling, controlled customer tra

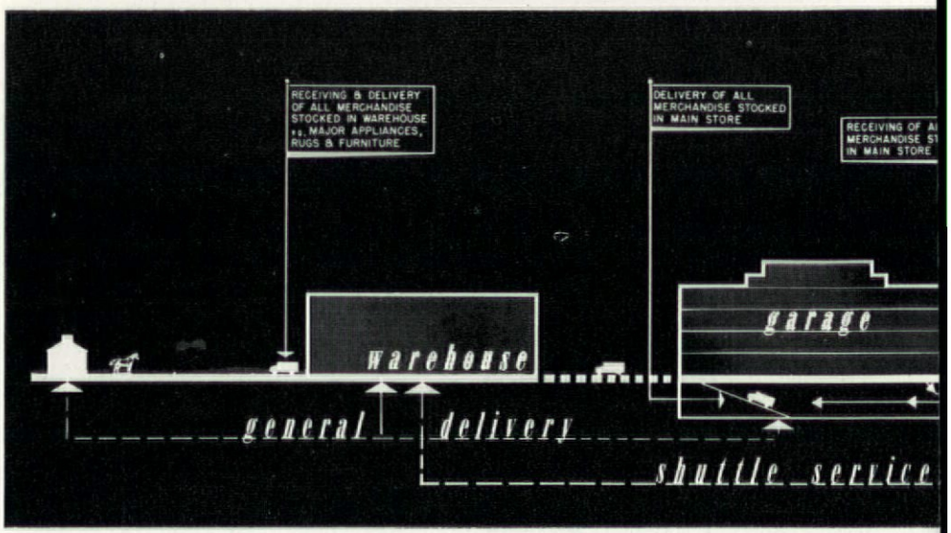
FOLEY BROTHERS, Owner
KENNETH FRANZHEIM, Architect
EDWARD E. ASHLEY, Consulting Engineer
RAYMOND LOEWY ASSOCIATES, Retail Planners and Designers
FRANK MESSER & SONS, Contractors

Designed to express modern merchandising methods rather than glorify the architectural or decorative approach, the new Foley store in Houston, Tex., offers a number of novel mechanical devices for expediting the handling of customers' purchases, incoming and outgoing stock. Structure and layout are the logical product of a series of exhaustive technical studies on merchandising and department store operation conducted by William T. Snaith of Raymond Loewy Associates. Flow charts shown here represent but a fraction of his findings and proposed remedial measures.

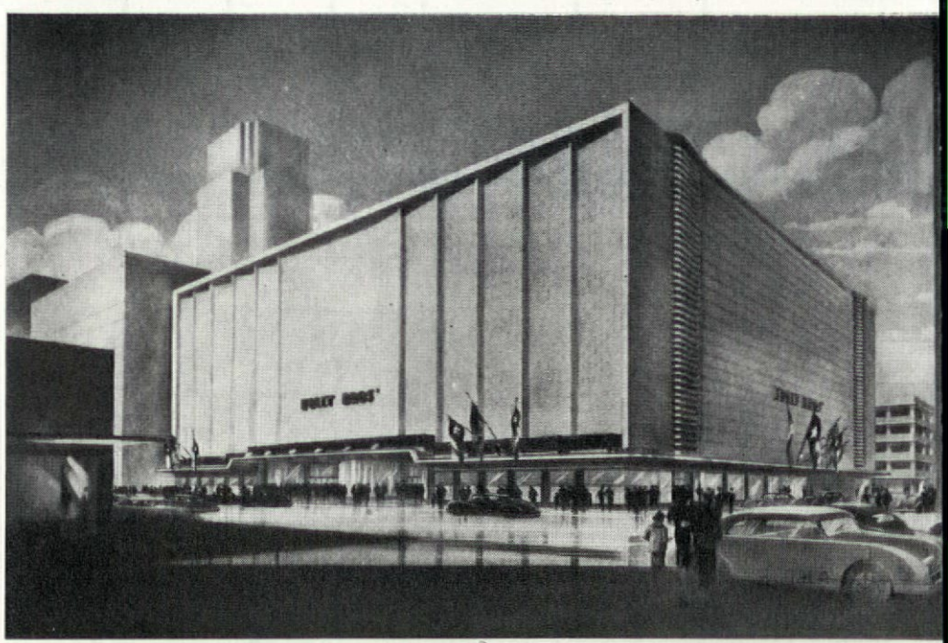
The plan of each floor features a central stock area which, in section, carries up through the building like a giant shaft. This core, equipped with freight elevators, lifts and dumbwaiters, greatly facilitates the introduction and distribution of goods to the selling area. Stock at each level is divided in two categories, "remote" and "forward" indicating its ultimate proximity on the selling floor to the receiving unit. Outgoing packages are handled by means of strategically located parcel drops all feeding a conveyor belt concealed between basement and first floor levels. This belt, in turn, carries merchandise under Travis St., to a "sorting ring" in the garage where packages are routed either to purchasers' cars parked above or to general delivery trucks.

While layout of the selling floors indicates no radical departures from currently accepted principles of store planning, there is evidence of a conscious and consistent attempt to maintain related departmental groupings with equalized prominence and accessibility.

Basic structure is reinforced concrete. Granite aggregate is used as exterior facing at ground level, brick and native stone above. Since, on all floors, public space is hemmed in by a narrow service area on the periphery, an interior facing of glazed tile was used for easy maintenance.

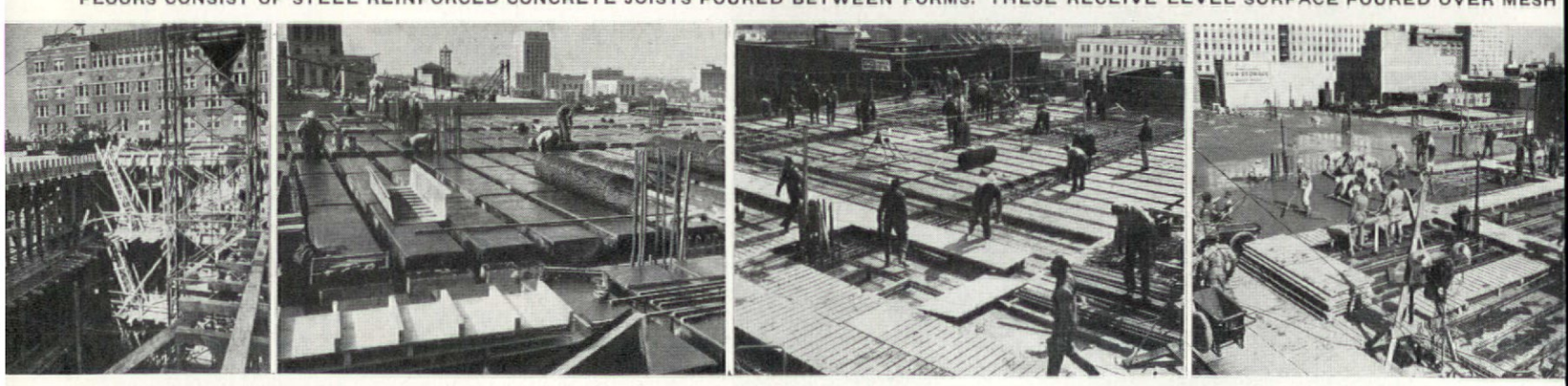


Photos by Bob Bailey

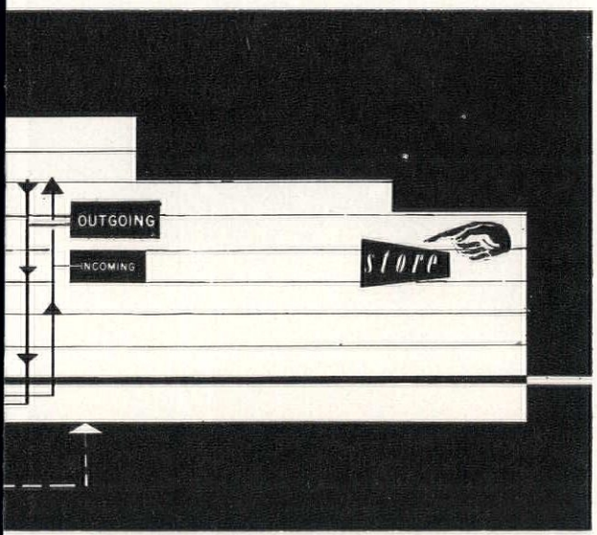


EXTERIOR LOUVERS ARE AIR INTAKES FOR FAN ROOMS LOCATED BEHIND

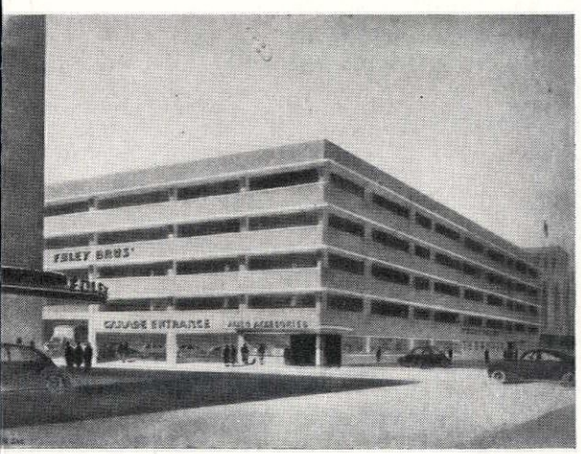
FLOORS CONSIST OF STEEL REINFORCED CONCRETE JOISTS POURED BETWEEN FORMS. THESE RECEIVE LEVEL SURFACE POURED OVER MESH



SCHEMATIC plans and section (right) indicate principal of stock progress and distribution. All stock kept immediately adjacent to sales areas reducing vertical traffic and revising the old fashioned concept of "remote" stock stored on another floor. Basement houses a self-contained budget store as well as major service units.

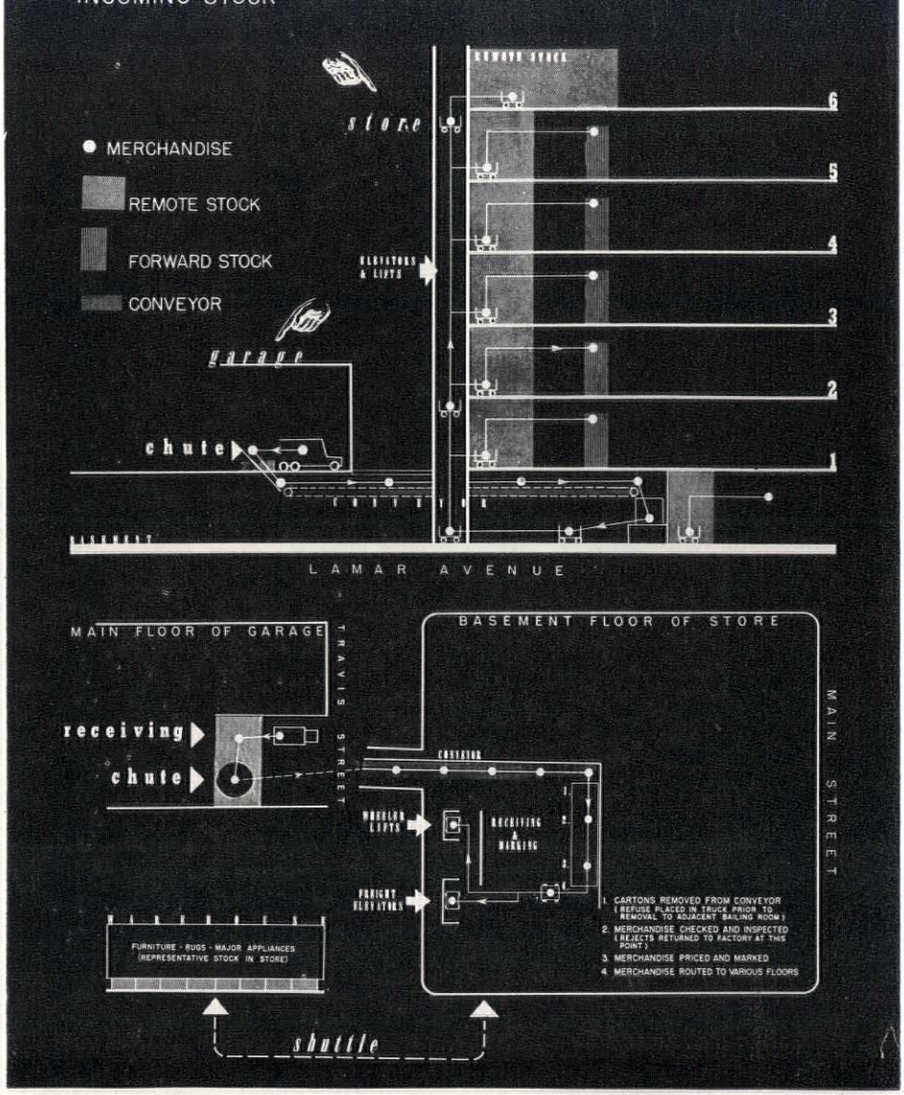


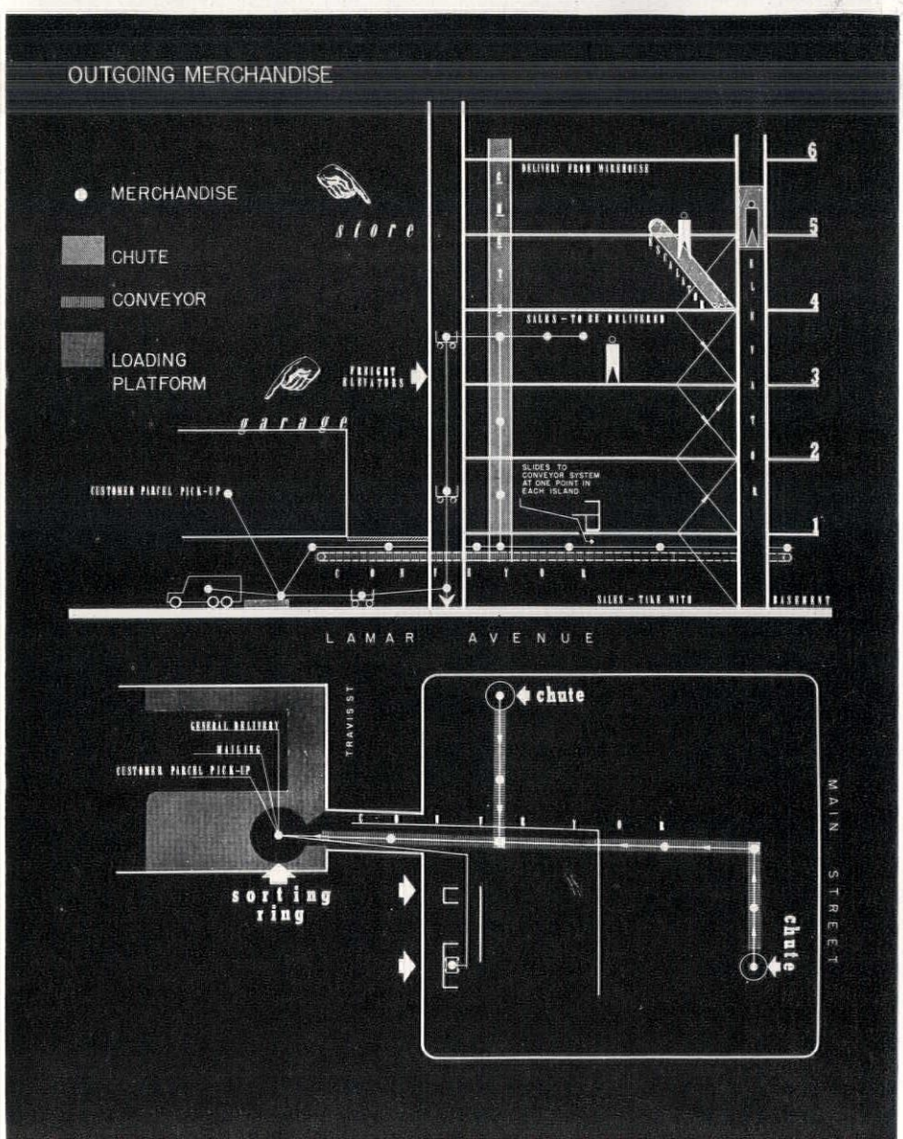
INTERDEPENDENCE of warehouse, garage and store are illustrated by flow chart above. Real location of warehouse is on the perimeter of the city. Only actual underground connection is between store and garage. Only samples of bulky merchandise, such as floor coverings, are kept within the store proper. Deliveries of these are made direct to customer from warehouse.



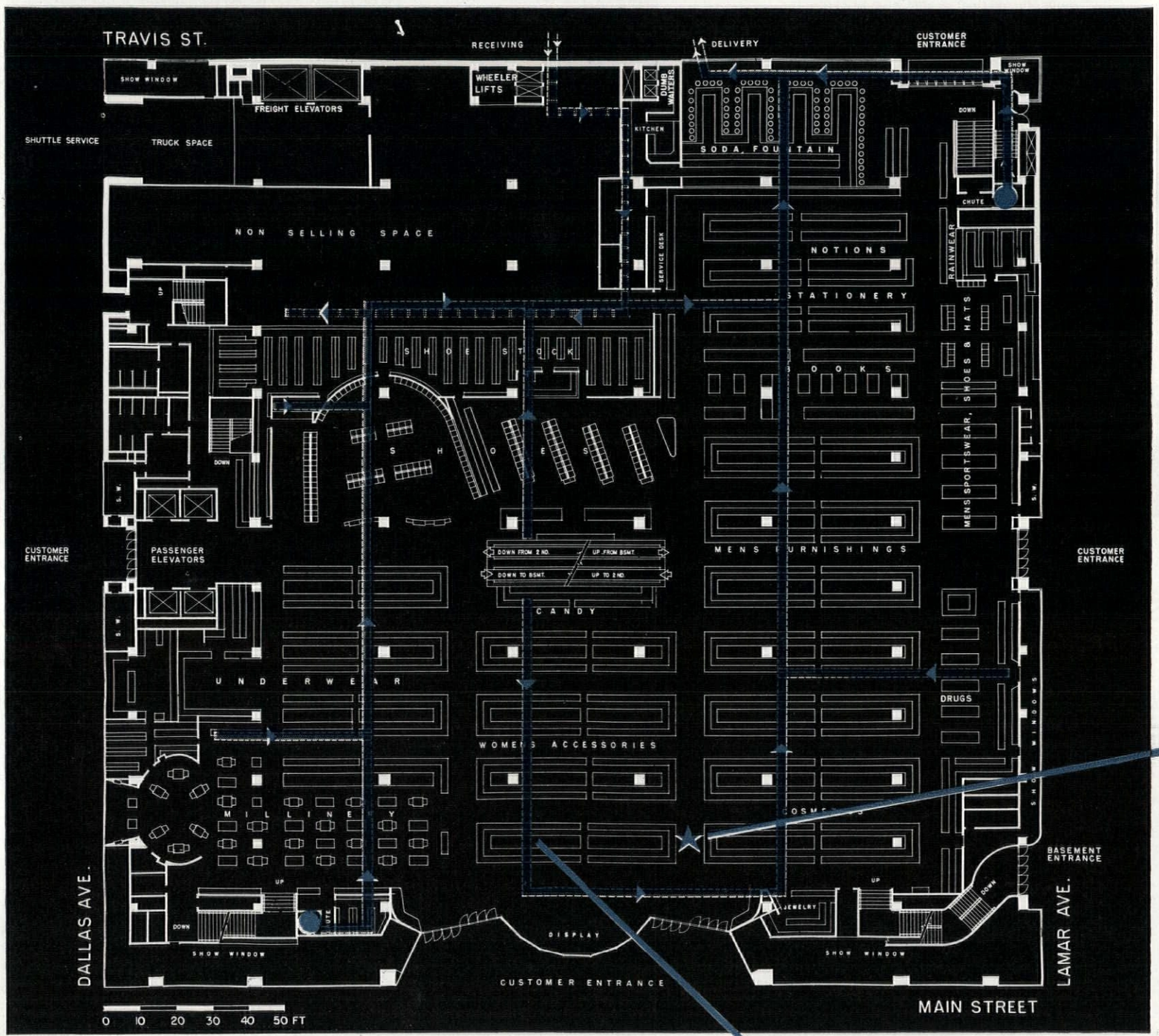
GARAGE'S OPEN PARKING FLOORS CUT TAX RATE

SECTION through center of building (right) shows rough positions of elevators and escalators, vertical parcel chutes and conveyors. Plan below shows location of main parcel chutes directly feeding basement conveyor belts. These belts are also fed by numerous smaller parcel drops strategically located on the first floor.

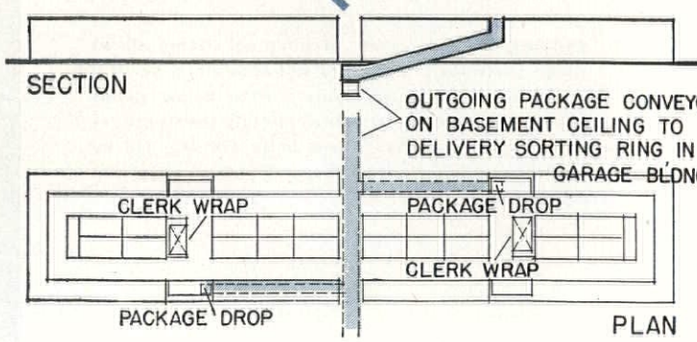


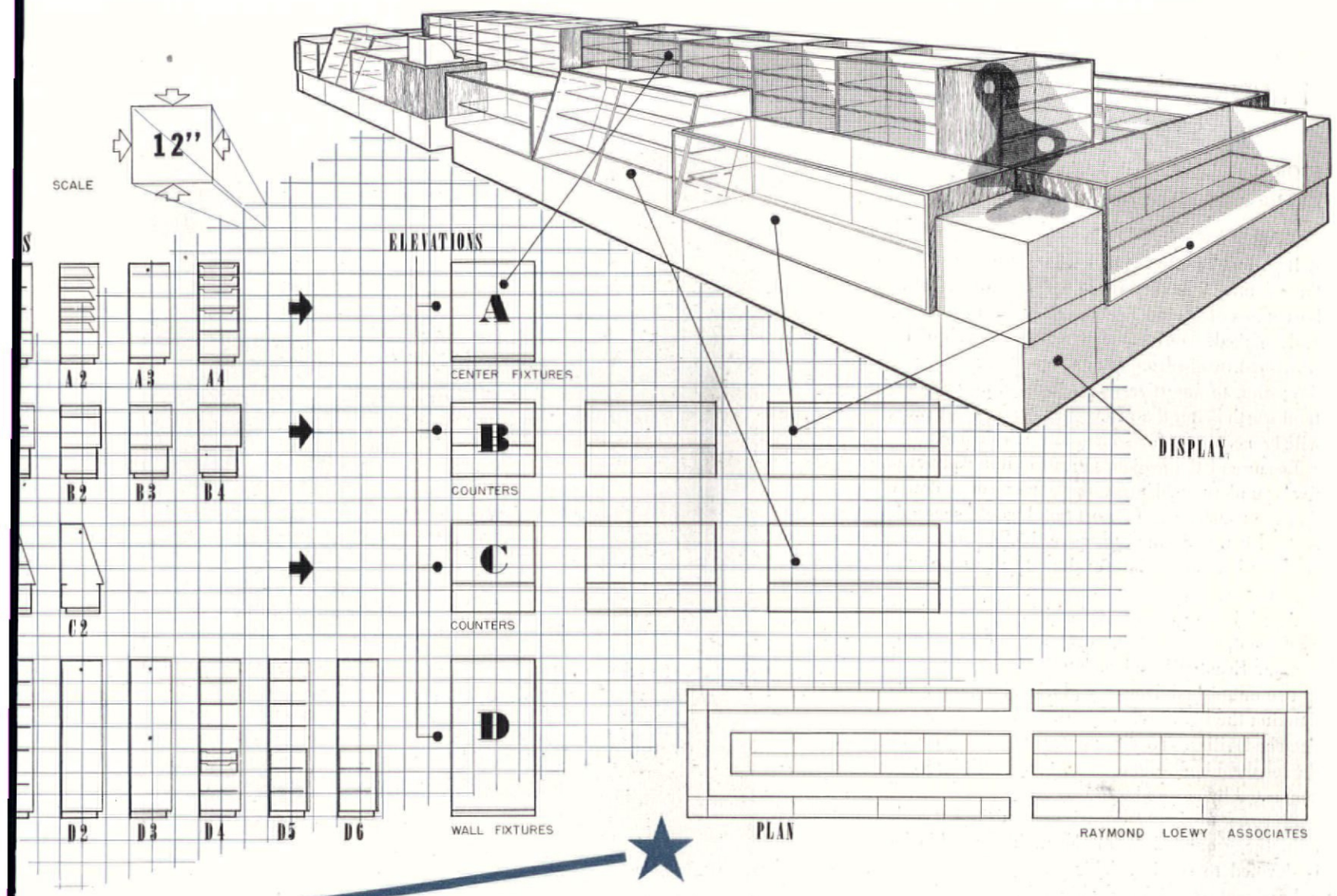


Modular fixtures are designed to increase amount of visible merchandise, afford maximum self-selection.



Plan of main floor creates three distinct selling areas. Centrally located escalators, ascending from one main aisle, descending from the other, assure maximum floor coverage by customers. Stairs are located at four corners of the building set in from outer wall to provide continuous trucking lane around perimeter. Color indicates conveyor belt system serving individual parcel drops at every island on the main floor. Passenger elevators on the Dallas Ave. side serve "carriage trade" — study having shown that this type of customer prefers elevators to escalators. They are also placed to provide direct access to the more expensive fashion departments above.





MODULAR UNITS come in four types, permit quick, easy rearrangement of the sales floor. Except for wall fixtures, all are below eye level. Counter cases have independent bases, are higher than conventional fixtures. Two types of upper sections eliminate the monotony of long reaches of counter top.



WOMEN'S APPAREL has peripheral hanging space, free-standing counters for accessories. Glass on the top and two sides of these units allow the customer to appraise stock on her own. Simple, easy-to-move tables (foreground) provide sufficient selling space for sweaters and blouses, etc.

WORK IN PROGRESS!

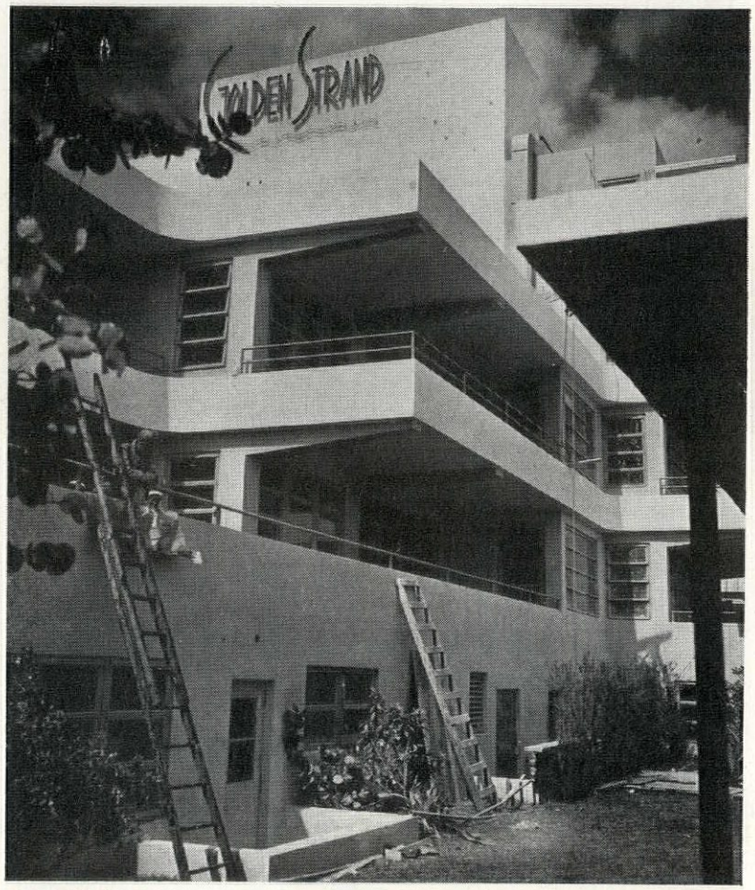
FLORIDA RESORT DEVELOPMENT uses luxurious apartmen

IGOR B. POLEVITZKY, A.I.A., Architect
CLARK & STORM, General Contractor

A luxurious apartment and villa group located on the Atlantic Ocean several miles north of the fabulous sands of Miami Beach, the Golden Strand is aptly named. During the past season, each of its furnished two-bedroom units rented for $125 per day; and, to amortize postwar building costs on land worth better than $3.00 per sq. ft., these rates will be necessary for some seasons to come.

Because of the project's location in a comparatively undeveloped area, there was some doubt that the usual type of resort hotel would succeed. Instead it was decided to make the Strand a self-contained development for long-term or permanent guests. The basic unit is thus not a room-and-bath but a completely furnished and serviced apartment, with balcony or terrace overlooking the sea. Eventually, 24 such units will be grouped in two unfinished five-story blocks along the west, flanking the highway. The other twenty units are detached villas. To circumvent a peculiarity in the local zoning ordinance, all these buildings are connected by covered walkways.

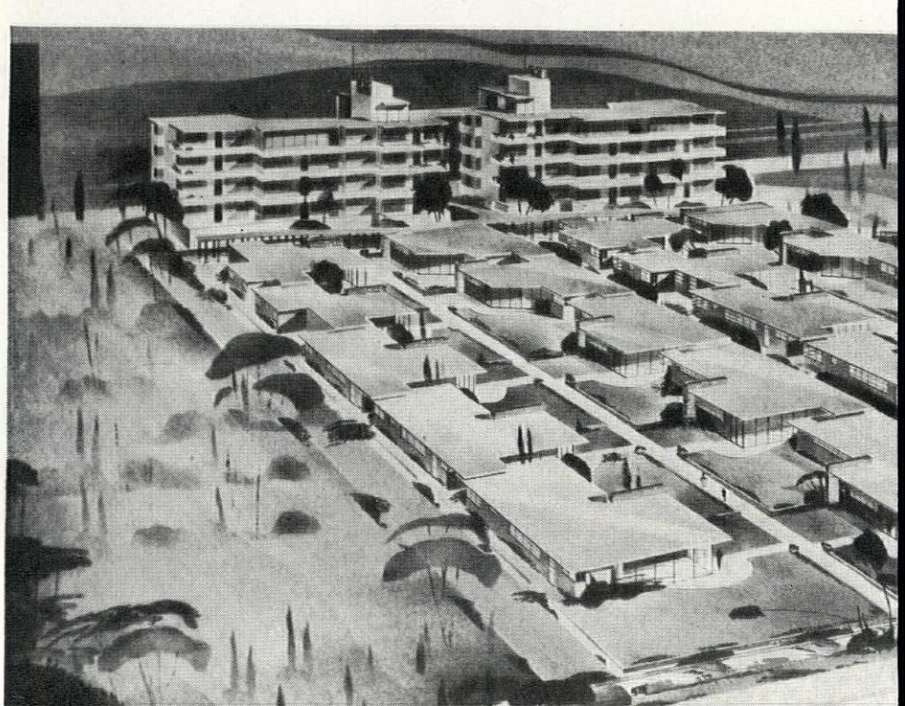
Since ocean view was a prime requisite for each unit, the ground floor of the multi-story blocks is devoted to service. This eliminates need for a basement—a tricky problem in the region—and gives each apartment a handsome cantilevered balcony. And since prevailing breezes are from the southeast and the western sun is a source of objectionable heat in summer, elevators, halls and stairs are concentrated along the west. The open corridors along this side are walled in vertical louvers of heat-absorbing glass.



REINFORCED CONCRETE FRAME PERMITS CANTILEVER BALCONIES



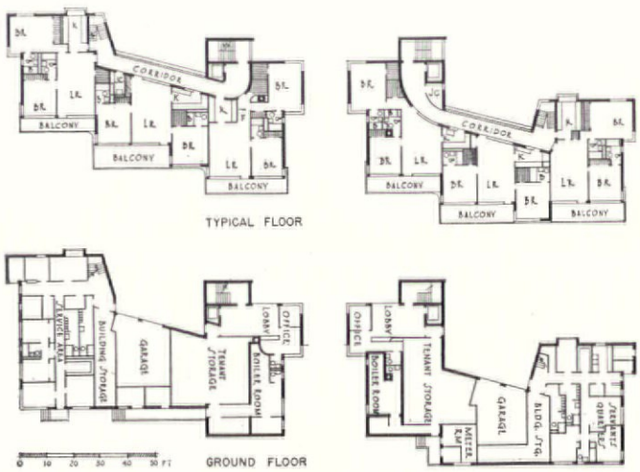
HEAT-ABSORBING GLASS LOUVERS PROTECT WEST SIDE HALLS



CONSTRUCTION OUTLINE

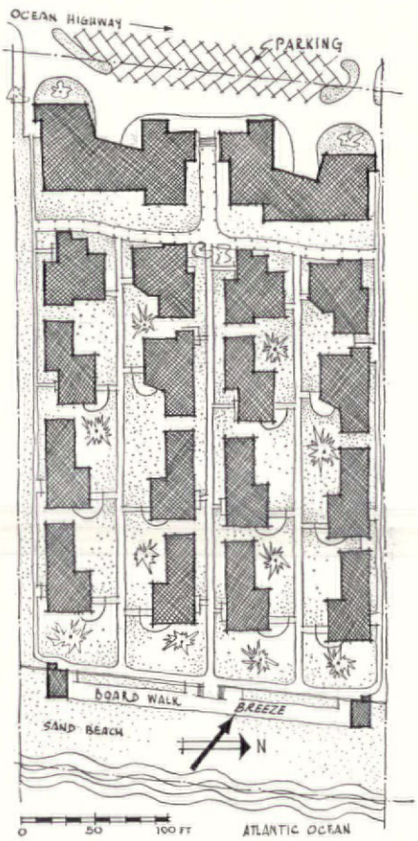
FOUNDATIONS (5-story)—wood piling; (1-story) reinforced footings. STRUCTURE: Exterior walls—concrete block, stucco, lath and plaster; some brick exposed in and out, and Kwiklay tile, Mason City Brick & Tile Co. Interior—cement block and wood stud. Columns—reinforced concrete, some lally. Floors—concrete slab or terrazzo. ROOF—built-up asphalt, felt and gravel, Armstrong Cork Co. SHEET METAL WORK: Flashing — copper. Ducts — Armco metal, American Rolling Mill Co. INSULATION: Roofs—mineral wool bats, U. S. Gypsum Co. WINDOWS: Sash—awning, Gate City Sash & Door Co. Glass—vertical louvers of heat resistant glass for west side of apartment building. Screens—Dow Saran, Dow Chemical Co. ELEVATORS—Eastern Elevator Co. FLOOR COVERINGS: Main rooms—Gulistan, A. & M. Karagheusian, Inc. and Bigelow-Sanford Carpet Co. Service area—tile, Armstrong Cork Co. FURNITURE—Artek-Pascoe and Heywood-Wakefield Co. Dishes—Russel Wright. WOOD AND METAL TRIM: Metal bucks—Atlantic Products Co. Doors—Rezo and solid cypress. HARDWARE—Schlage Lock Co. and Harvey Hubbel, Inc. PAINTS—Sherwin-Williams Co. and Sec Mfg. Co. AIR CONDITIONING—Cocktail lounge, York Corp. Boiler—Kewanee Boiler Corp. Radiators—Trane Co. Grilles—Tuttle & Bailey, Inc.

th hotel service in detached villas, multi-story blocks.



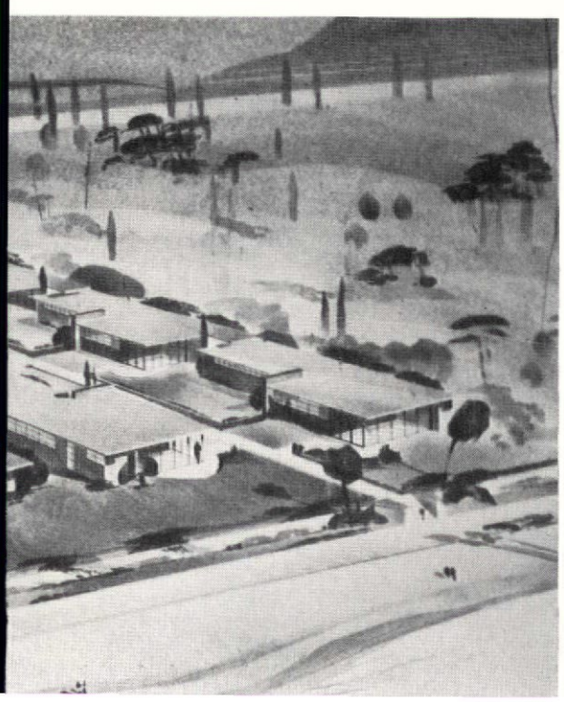


INCOMPLETE FIVE-STORY BLOCKS OVERLOOK INDIVIDUAL VILLAS



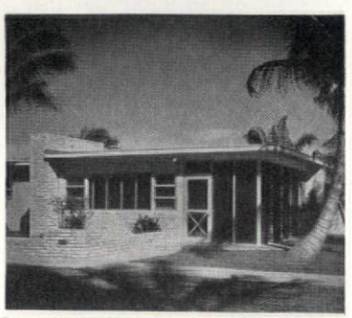


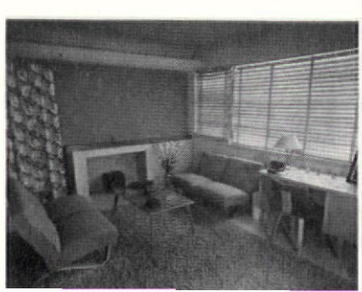
EACH VILLA HAS SCREENED PORCH FOR OCEAN VIEW AND BREEZE

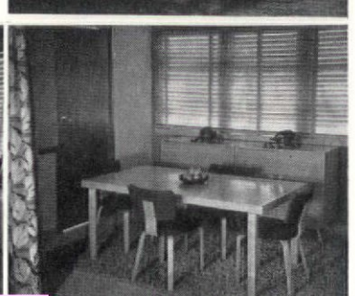




COMPLETELY FURNISHED in modern colors and designs, each unit has own linens, china, silverware bric-a-brac and hotel service.







WORK IN PROGRESS!

QUONSET HOUSE on a California hillside is built of rea

available materials and ingeniously opened to its surroundi

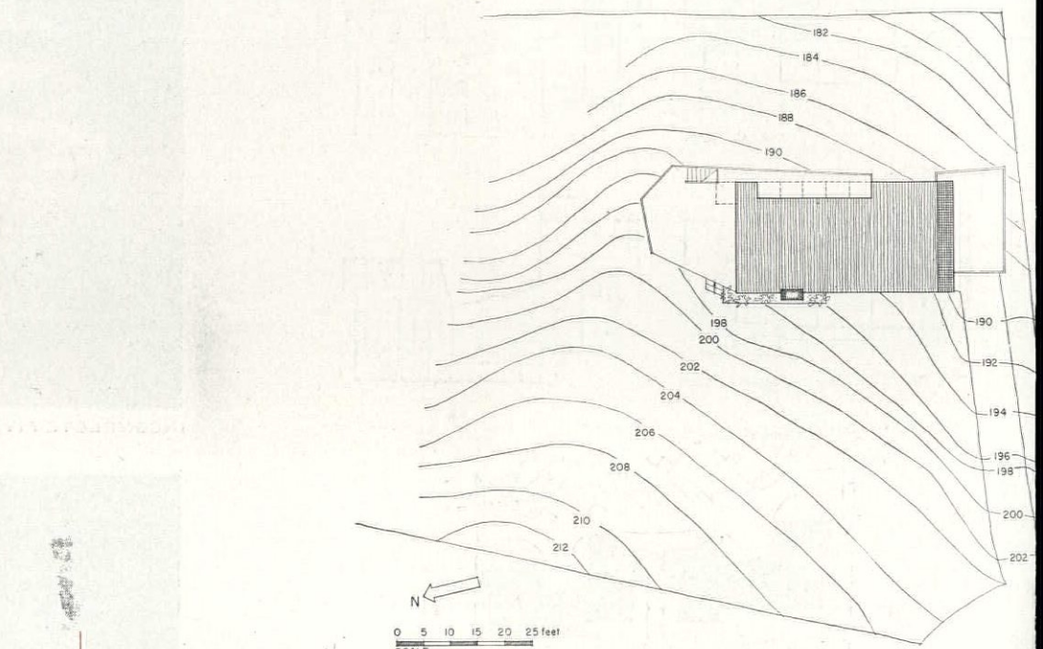
MR. & MRS. GARY GROVER, Owners
JOHN CARDEN CAMPBELL, Designer
WORLEY K. WONG, Architect
TOM BOOTH, Contractor & Mechanical Engineer

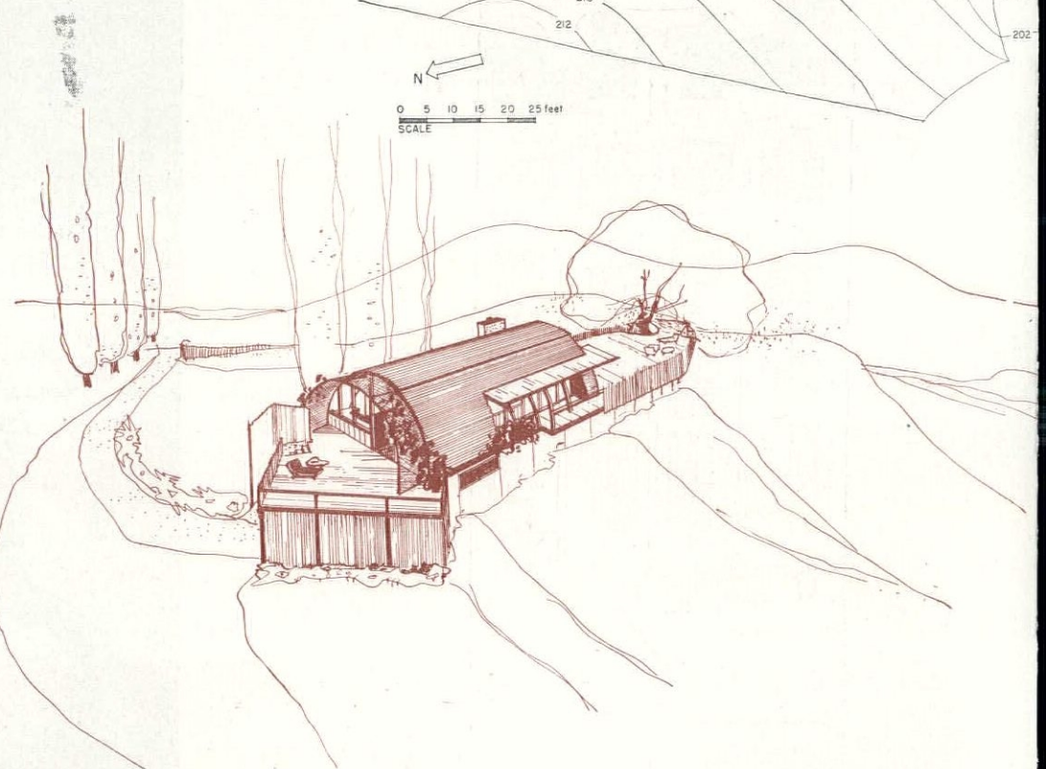
More than anything else, this small house in the hilly suburbs of Oakland Calif., indicates that the war-proved Quonset is readily converted to comfortable peace-time living. Through careful handling of design details, its utilitarian form has here been adapted to a peaceful rural landscape.

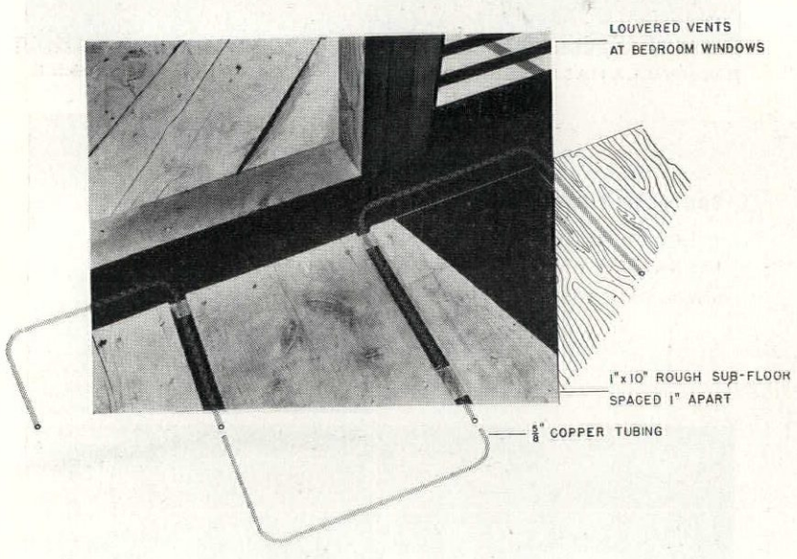
Basically a 20 x 36 ft. "Quonset 20", the Grover house is so planned that there is little reason for the occupants to stand along the sides of the building where headroom is limited. The west side is lined with a fireplace and its flanking bookshelves, a bathroom and a large storage closet. On the opposite side, the troublesome curved wall is largely replaced by vertical doors and windows which open the rooms to the dining porch and the site's most attractive view. Because they would clutter both the porch and the view, the steel ribs were cut off at the ceiling level. However, the Quonset's vaulted shape is uncomplicated by the usual dormers—in fact, the attractive form is extended by a metal grille which shades the open bedroom end and, as a background for vines, helps blend the building with the landscape.

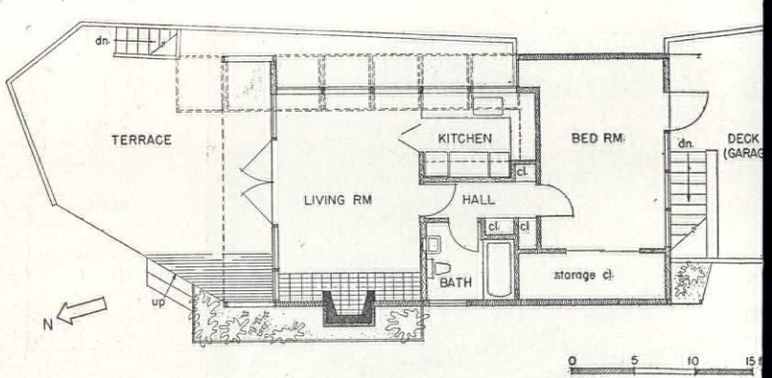
The original conception of the house (perspective, right) has been modified by a reorientation of the garage and roof deck and by the inclusion of a bedroom and darkroom in the basement. Also, while the large oak tree which controlled the shape of the living room porch has been cut down, it will be replaced by a cluster of poplars which will accentuate the house's curved design without obstructing the view.

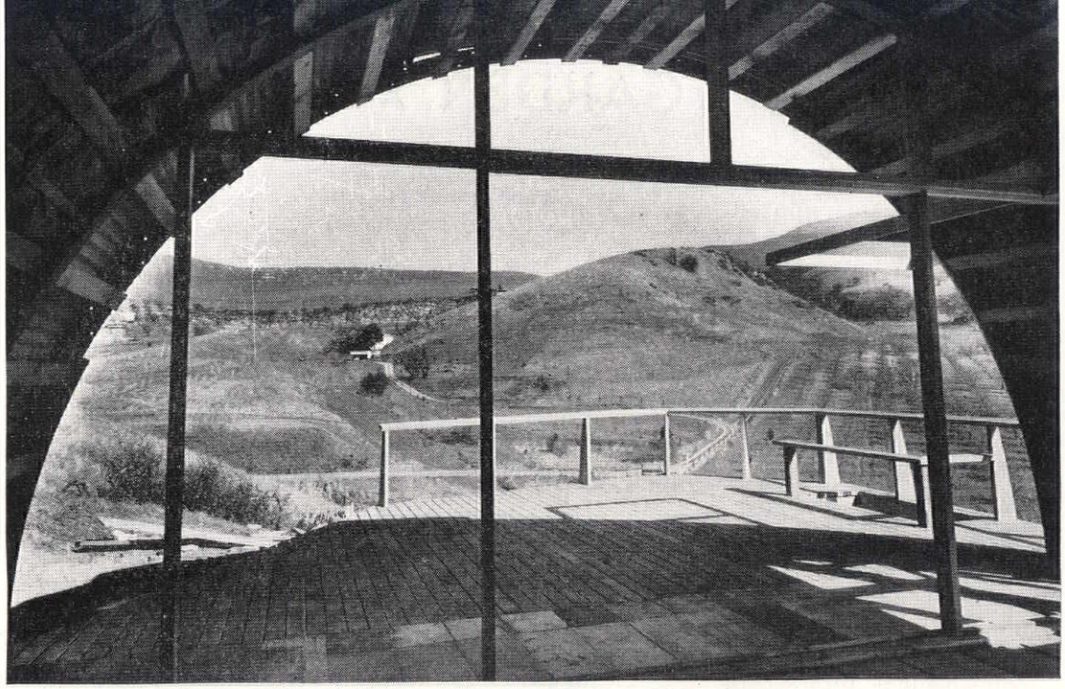
Heat is provided by copper tubing laid on floor joists between 1 x 10 in. subfloor planks and covered with ¼ in. plywood and linoleum.









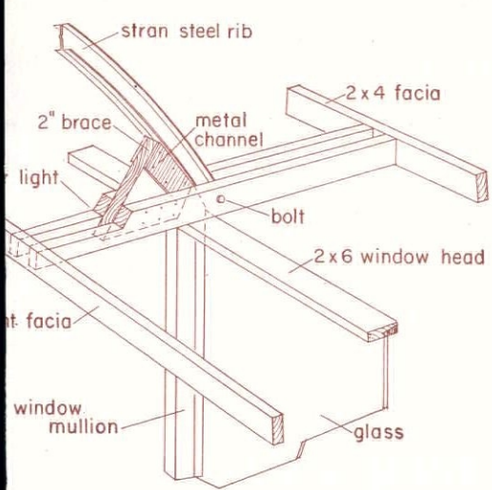


LIVING ROOM AND PORCH WILL BE SEPARATED BY GLASS WALL TO CAPITALIZE ON DISTANT VIEW, MAXIMUM LIGHT



Photos by Sonya Noskowiak

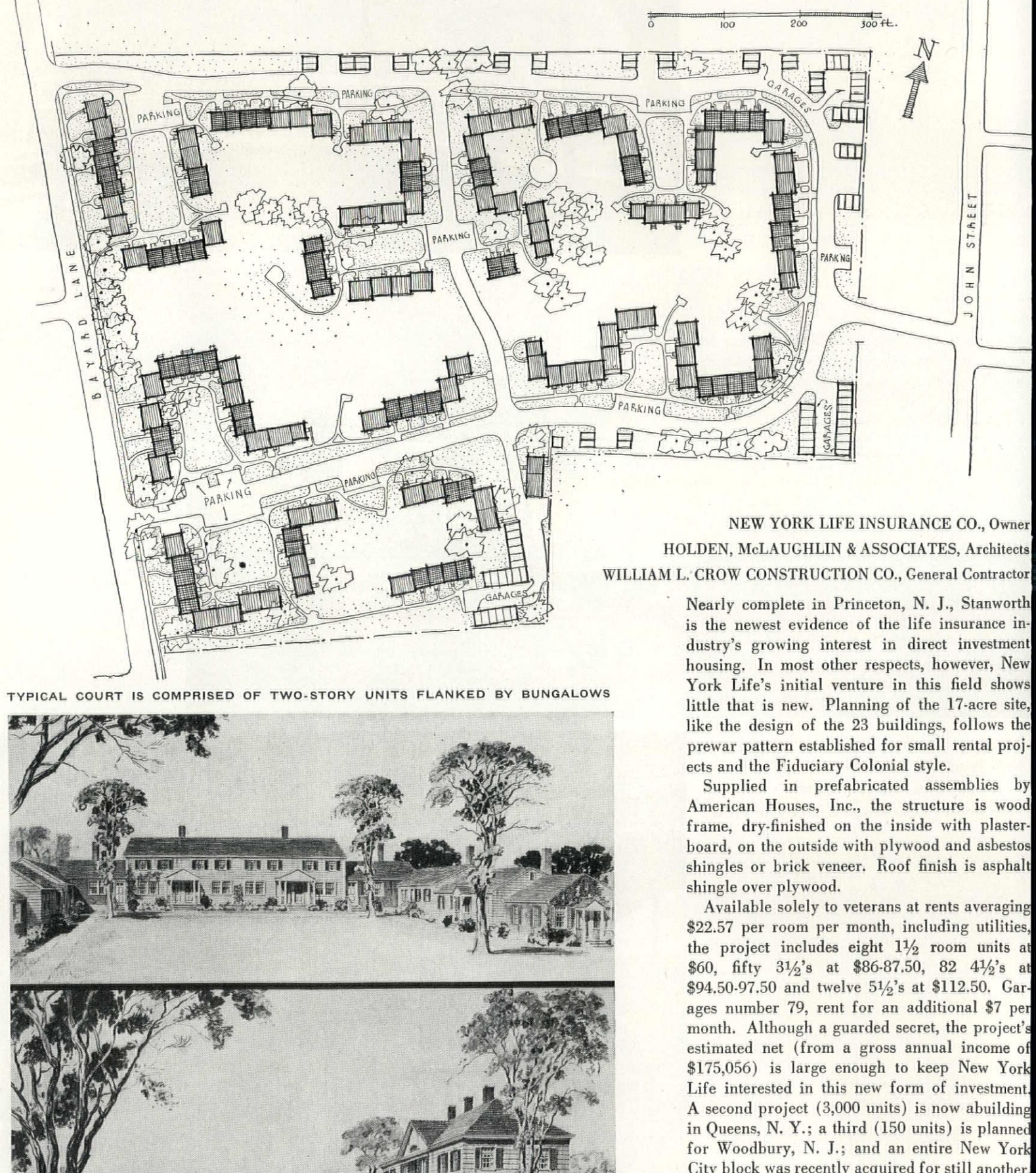
BIG WINDOW, CREATED BY REMOVAL OF ARCHED RIBS, OPENS KITCHEN AND LIVING ROOM TO PRINCIPAL EASTWARD VIEW





WORK IN PROGRESS!

GARDEN APARTMENTS help solve university town's veteran housing problem via life insurance company investment.



NEW YORK LIFE INSURANCE CO., Owner

HOLDEN, McLAUGHLIN & ASSOCIATES, Architects

WILLIAM L. CROW CONSTRUCTION CO., General Contractor

Nearly complete in Princeton, N. J., Stanworth is the newest evidence of the life insurance industry's growing interest in direct investment housing. In most other respects, however, New York Life's initial venture in this field shows little that is new. Planning of the 17-acre site, like the design of the 23 buildings, follows the prewar pattern established for small rental projects and the Fiduciary Colonial style.

Supplied in prefabricated assemblies by American Houses, Inc., the structure is wood frame, dry-finished on the inside with plasterboard, on the outside with plywood and asbestos shingles or brick veneer. Roof finish is asphalt shingle over plywood.

Available solely to veterans at rents averaging $22.57 per room per month, including utilities, the project includes eight 1½ room units at $60, fifty 3½'s at $86-87.50, 82 4½'s at $94.50-97.50 and twelve 5½'s at $112.50. Garages number 79, rent for an additional $7 per month. Although a guarded secret, the project's estimated net (from a gross annual income of $175,056) is large enough to keep New York Life interested in this new form of investment. A second project (3,000 units) is now abuilding in Queens, N. Y.; a third (150 units) is planned for Woodbury, N. J.; and an entire New York City block was recently acquired for still another.

TYPICAL COURT IS COMPRISED OF TWO-STORY UNITS FLANKED BY BUNGALOWS



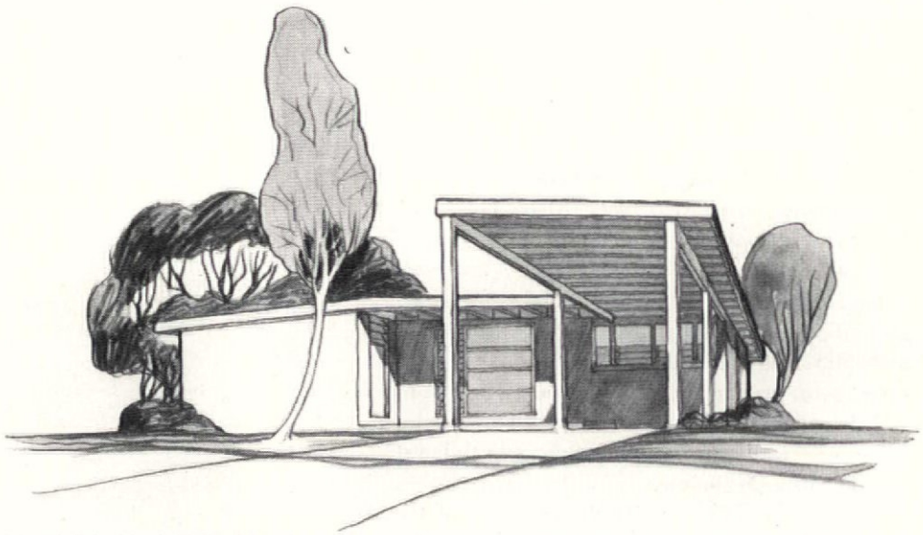
WORK IN PROGRESS!

VETERANS' HOUSES—An intelligent builder and a skillful architect team up to produce pleasing, moderately-priced units.

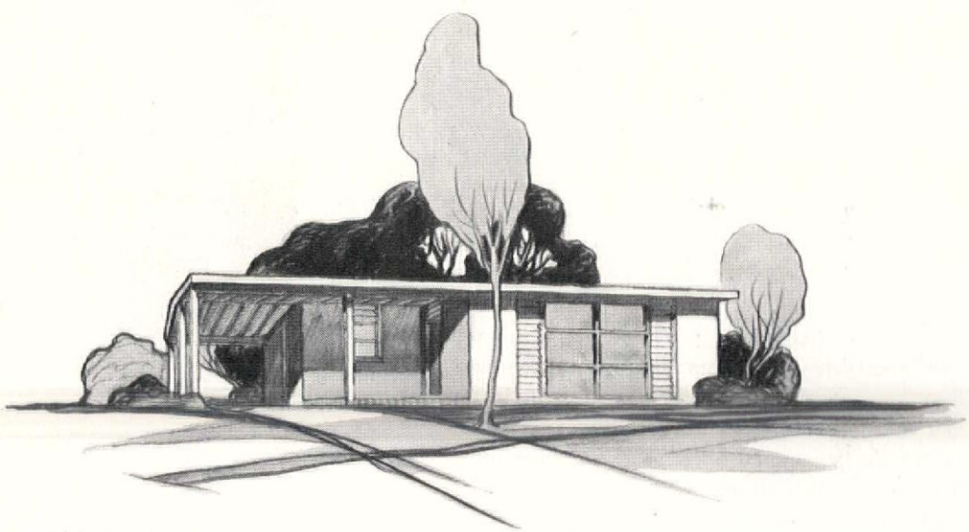
ARTHUR T. BROWN, Architect
M. M. SUNDT, Owner and Builder

The 200-odd houses which the Sundt Company is erecting for veterans in the southeast section of Tucson, Arizona, are evidence that determination and skill can produce housing by conventional methods even in these parlous times. Selling for $7,500 complete, the houses will undercut the current price for similar accommodations by a sizeable amount. And there is little doubt that, in general quality of plan and appearance, Architect Brown's disarmingly simple designs will be far ahead of their competitors.

Actually, any distinction or economy achieved in these houses is by simple, commonsense methods. There is only one floor plan, any side of which may be turned toward the street. This sidesteps monotony, while yielding big economies in field work. All interior partitions are placed as soon as concrete floor slabs are set: this prevents expensive dimensional errors in outside brick walls. All door and window openings carry up to the plate line. All glass is fixed to reduce millwork and carpentry; and all louvered vents have large-scale slats to make fabrication, painting and cleaning easier. The roof is framed of a single member at shallow pitch, which eliminates ceiling joists and trusswork. Rockwool fill rests directly on perforated plasterboard lath; ventilation space separates insulation from built-up roofing.

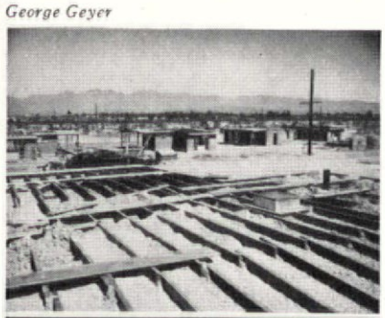


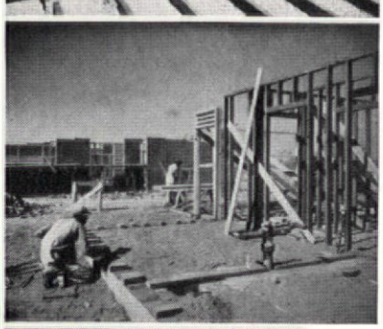
ONE PLAN IS USED THROUGHOUT PROJECT. VARIATIONS IN SITING AND . . .

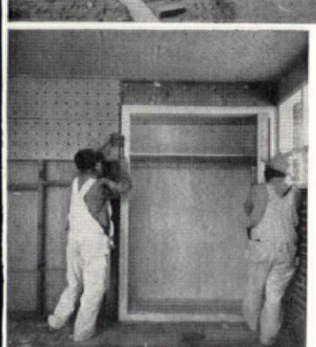


PLACING OF CARPORT AND ENTRANCE PORCH YIELD AMPLE INDIVIDUALITY

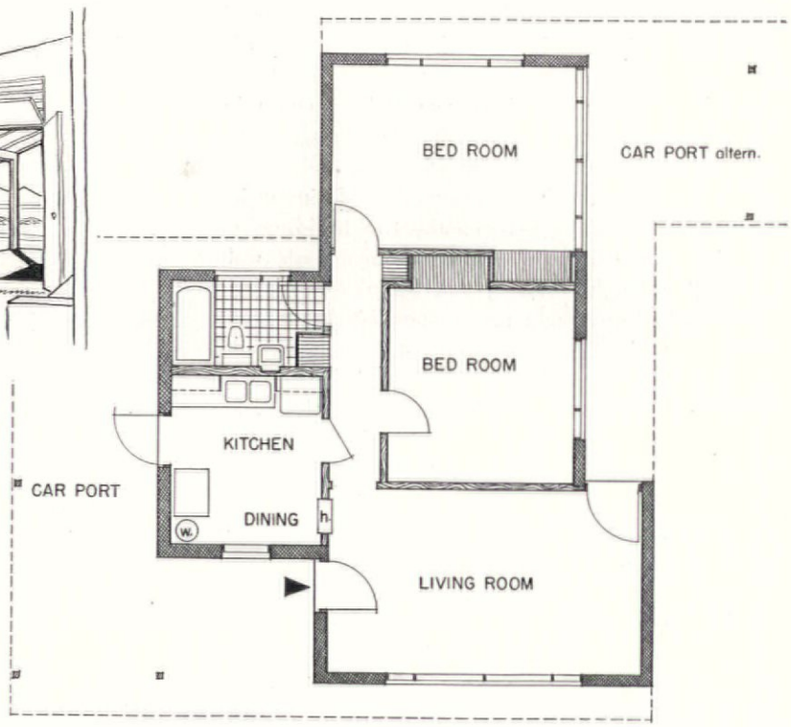
George Geyer











WORK IN PROGRESS!

FURNITURE STORE undergoes both face-lifting and surge

KETCHUM, GINA & SHARP, Architects
G. D. CAMPBELL BUILDING CO., General Contractors

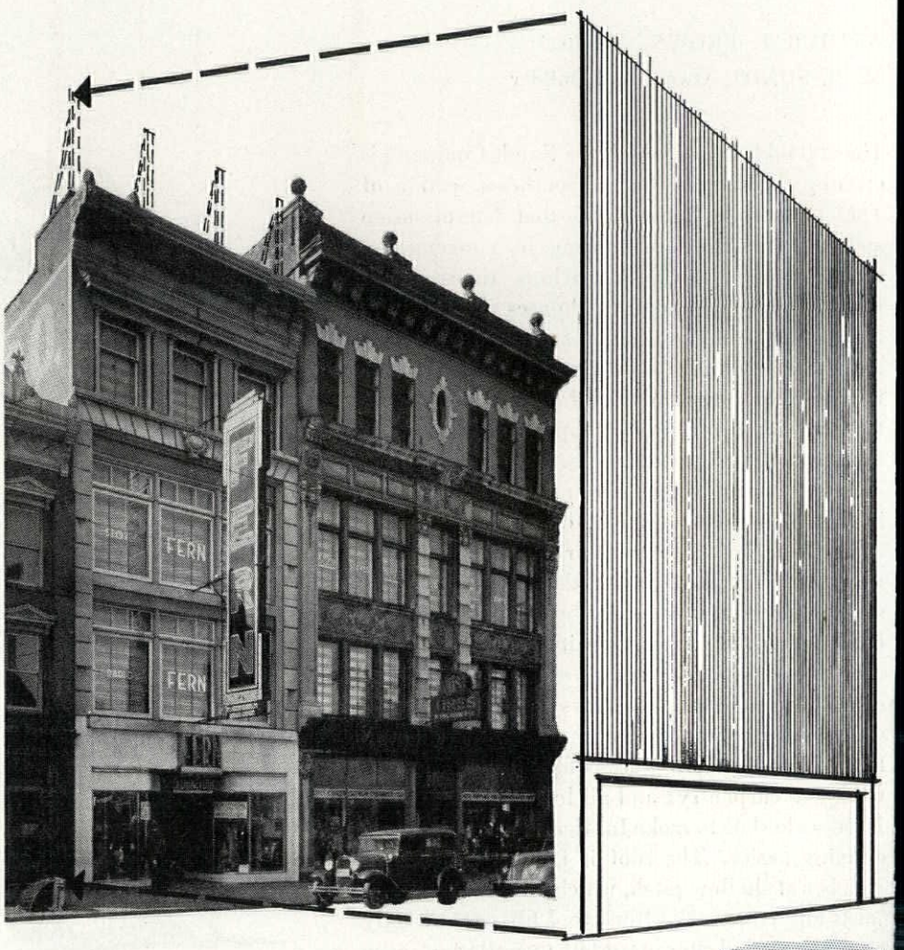
These two old buildings in Schenectady, N. Y. are currently having their faces lifted. The transformation—scheduled for completion by June—will be much more than skin deep, however. When completed, it will have unified two disparate buildings into a single, efficient merchandising unit, provided an additional 10,000 sq. ft. of sales space, produced a handsome new open front and five floors of attractive, well-lighted sales space organized and equipped according to latest merchandising principles.

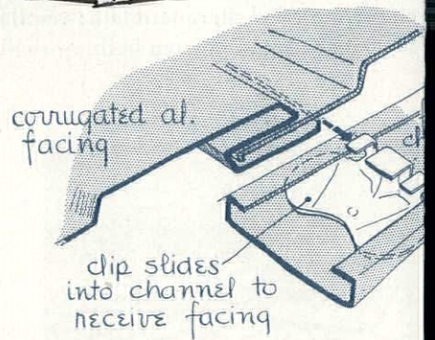
The obvious way to unify the exteriors of the two buildings was to cover them with a non-structural skin. Since window openings were of different sizes and levels, the designers wisely chose to ignore them. This idea appealed to the owners, to whom wall space was more important than daylighting. As installed, the new skin will consist of corrugated sheets of porcelain-enamel clipped on to an aluminum hangar system of patented design. The resulting facade, by its very simplicity in a Victorian block, should be more effective than the brightest billboard.

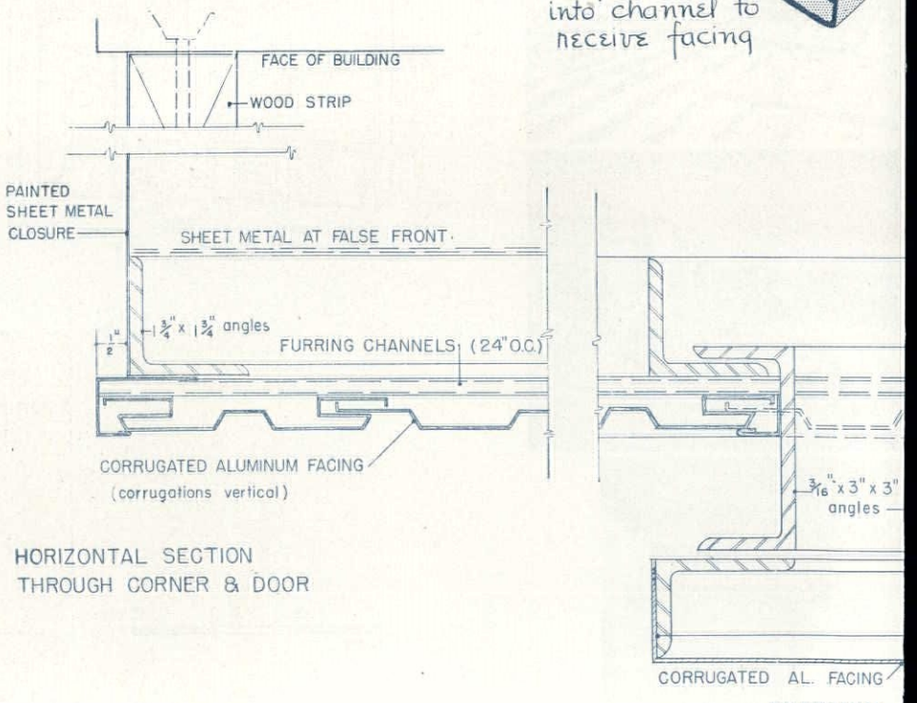
To comply with local fire ordinances, emergency doors had to be provided at each level. Far from detracting from its appearance, these have been converted into decorative items in the new facade. Before installation, it was necessary to cut the stone and sheetmetal ornamentation back to the face of the wall. A more difficult problem, structurally, was the reorganization of show window space and entrance into an open, coherent whole. Two load-bearing masonry piers in the center of the larger front were removed. Though their replacement by a steel girder and columns was routine, a tricky condition below sidewalk level was circumvented by a new reinforced concrete mat that left safe footings undisturbed while correcting unsafe ones.

A similar condition occurred inside in cutting a 30 ft. opening between the two buildings on the ground floor. Each had its own party wall, ceiling heights varied, and the new structural steel had to clear a new suspended ceiling, continuous through the entire first floor. This, too, has been ingeniously accomplished.

As in every remodeling, solution of prosaic structural problems like these underlies the successful renovation of the Union Fern store. Others are also underway: the airshaft and toilet stacks in the center of the larger building are being removed; a new passenger elevator and stairway is being installed; all partitions and unnecessary columns are being removed. The end result will be a thoroughly modernized building whose cost can be amortized over a long period of years.

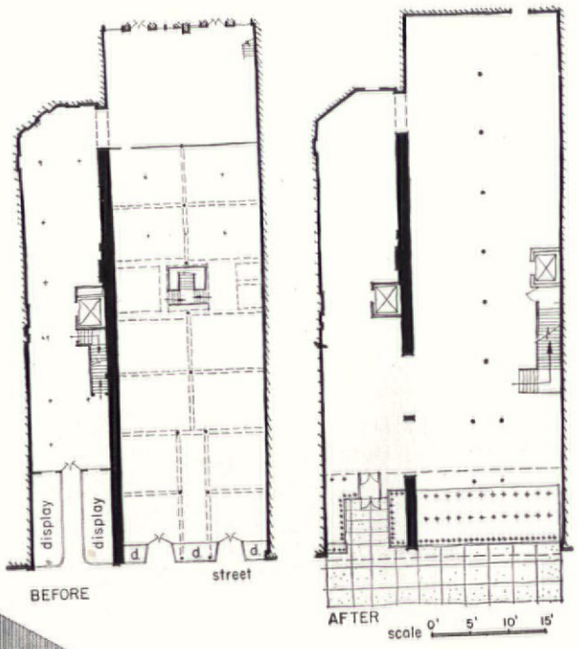


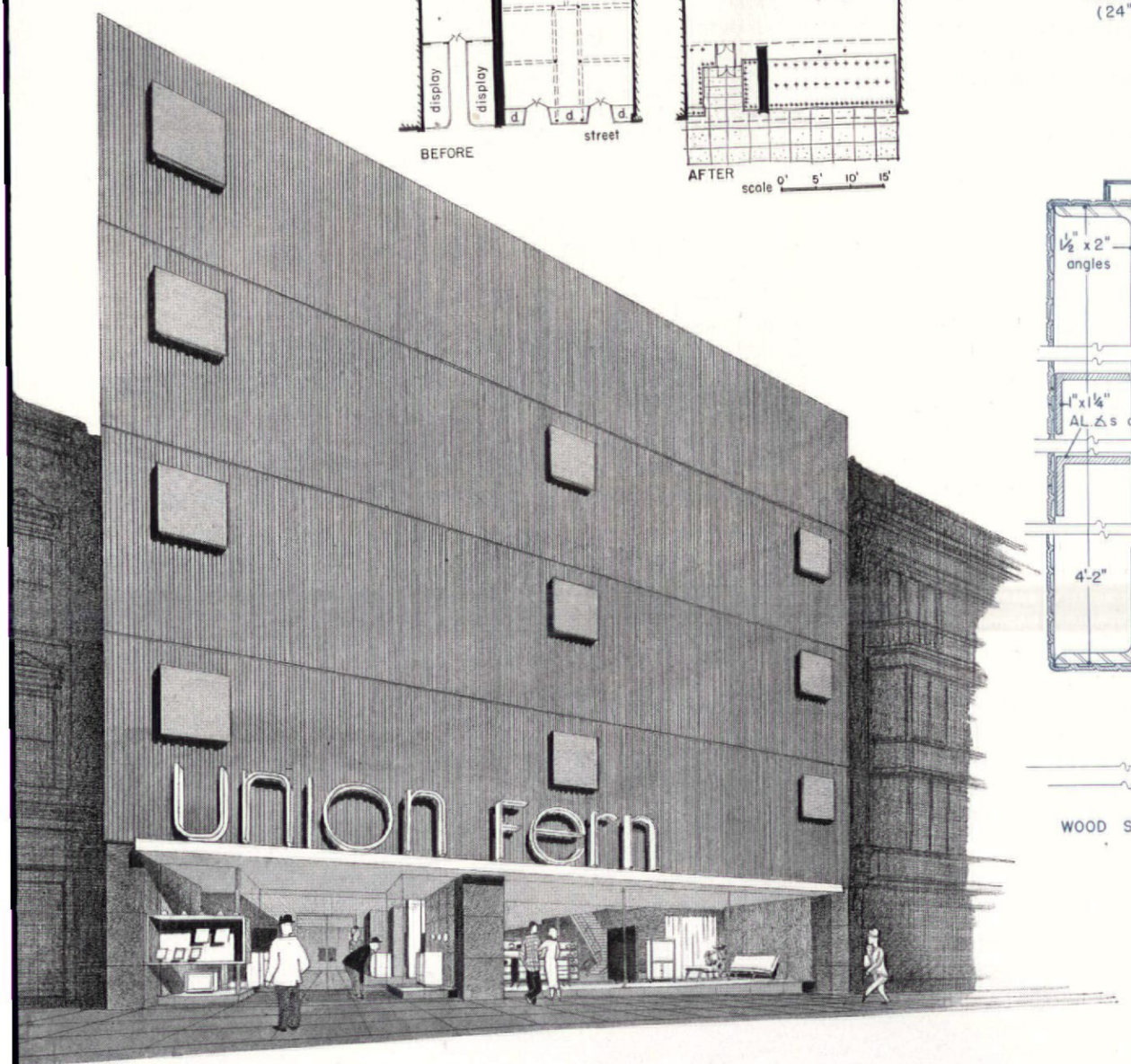


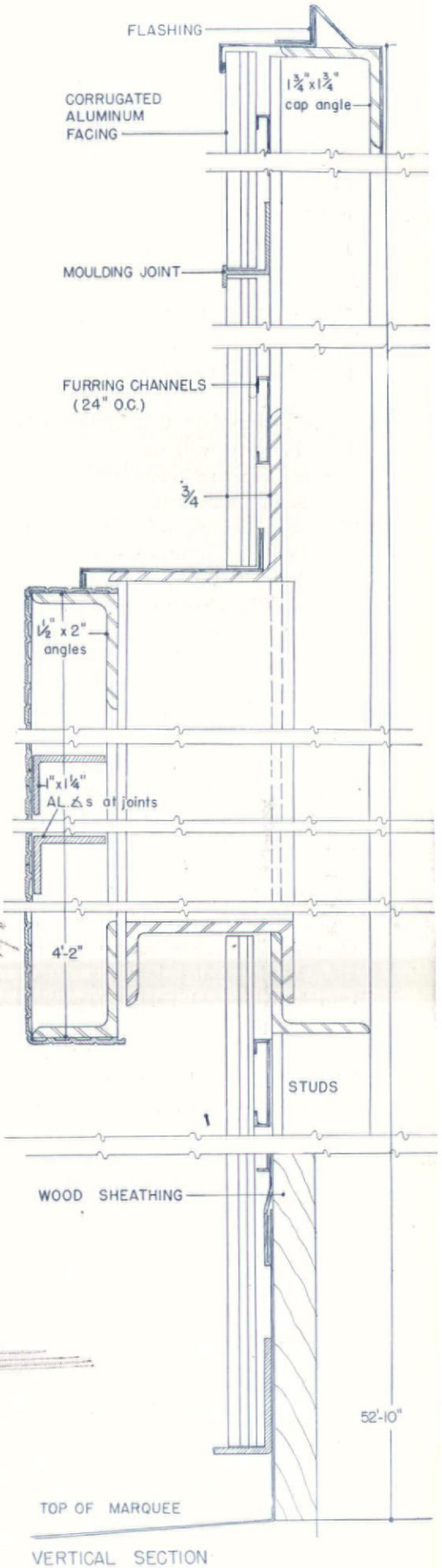


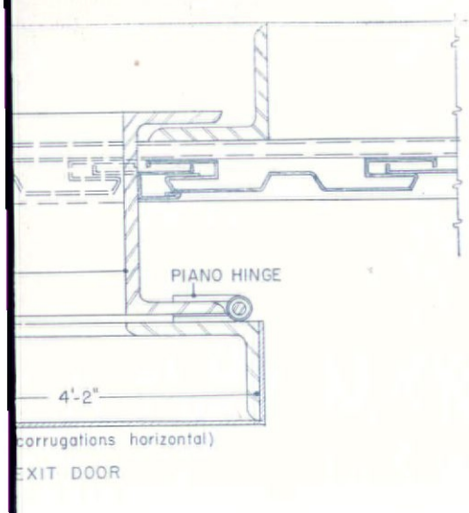
HORIZONTAL SECTION THROUGH CORNER & DOOR

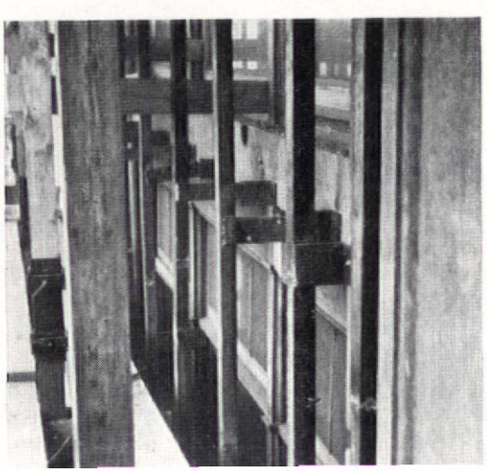
neet merchandising needs.











STEEL ANGLES have been anchored to base of original front wall preparatory to receiving horizontal aluminum channels. Porcelain sheets are then clipped to these channels, forming finished skin.

WORK IN PROGRESS!

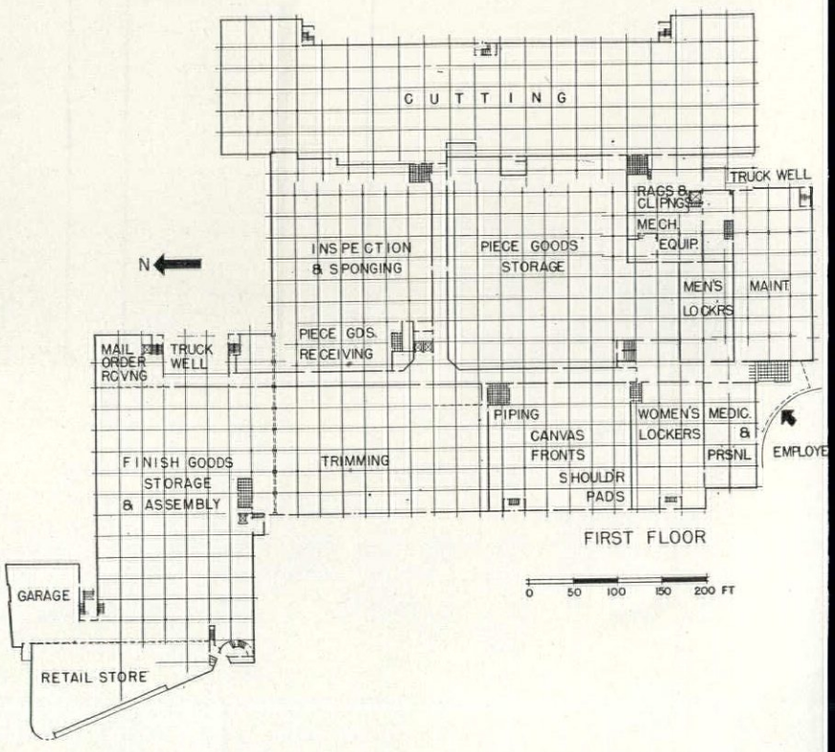
CLOTHING PLANT

Rochester city fathers rezone a residen

ALBERT KAHN, ASSOCIATED ARCHITECTS & ENGINEERS, INC., Architects
EGGLY-FURLOW ENGINEERS, Mechanical Engineers
J. B. PIKE & SON, INC., General Contractor

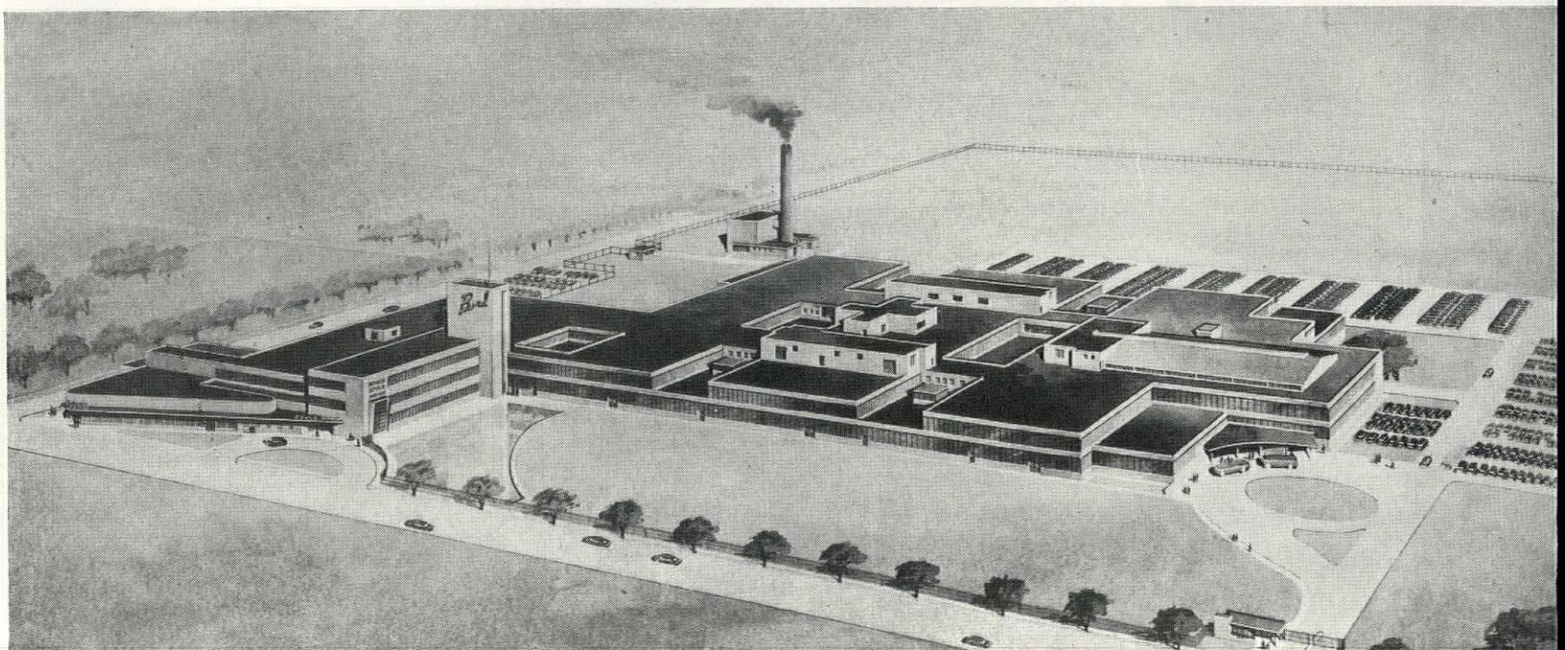
The new Bond clothing plant in Rochester, N. Y. represents not only a trend in industrial site placement, but marks also a practical step toward the city planner's goal of an integrated community. The fact that clothing fabrication is light industry, without the smoke and clangor common to heavy manufacturing, plus the unusually handsome, clean-cut design of the Bond factory buildings, made this particular plant acceptable in a residential district. City officials, considering it a community asset from the point of view of appearance (it covers only 17½ acres of a 56-acre landscaped site), taxation (industrial revenue is higher than residential) and population (peak employment provides for 11,500 workers), decided to amend the zoning laws and even lend a hand by acquiring 1,000 neighboring building lots within walking distance for employe housing.

Design features which orient the factory to its residential setting include a special truck delivery system (necessary because of the absence of rail lines for shipping), planned parking space for workers' cars, a bus shelter and employe cafeteria seating 2,500 people.The manufacturing area, administration building, garage and retail store have been designed as separate but connecting units, thus placing every operation under one roof. At the second-story level, seven courts break the internal area, allowing two to three glass walls in each of the second-floor workshops. Continuous sash windows are a feature throughout and have been used to sales advantage in the triangular retail store near the highway. Cost, exclusive of equipment, is $7 million.

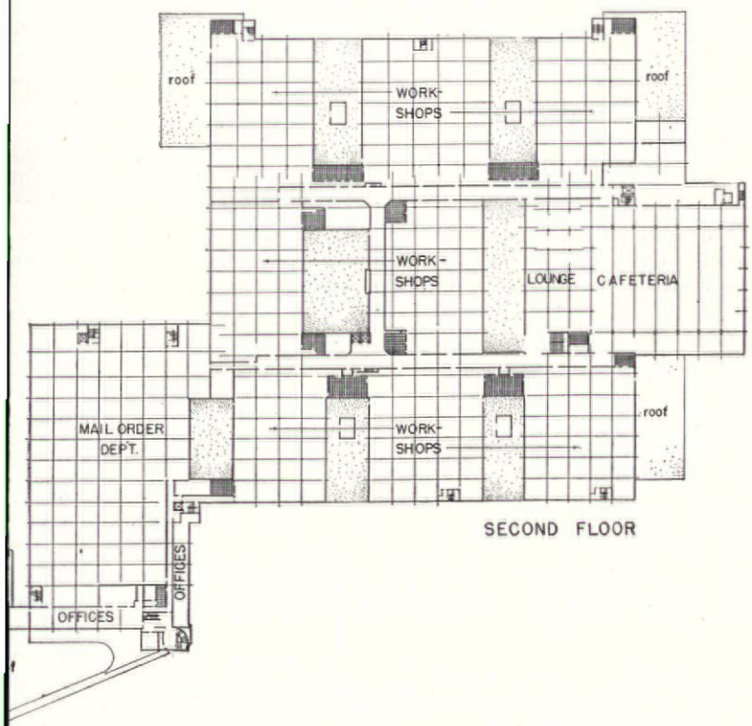


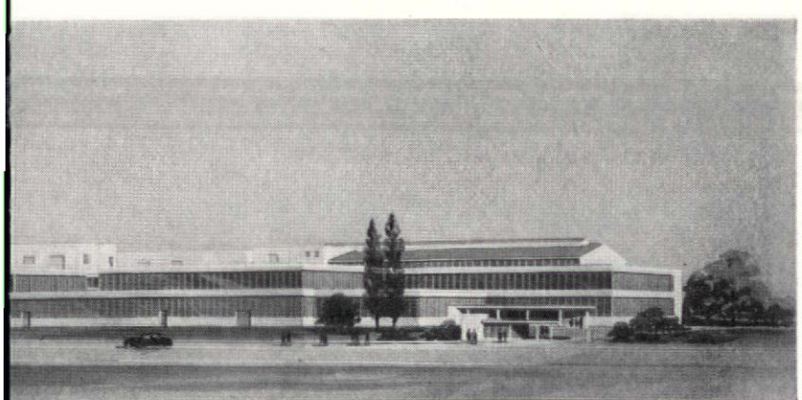


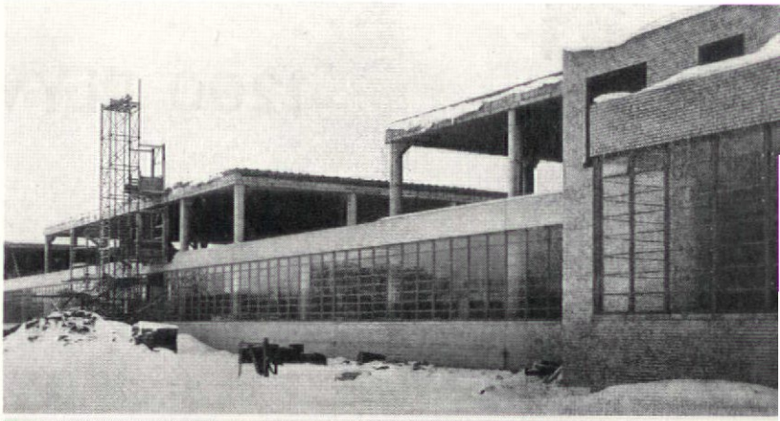
BIRDSEYE VIEW AND ELEVATION REVEAL VARIED HEIGHT OF PLANT AREAS. NOTE STORE (LEFT), BUS STATION AND PARKING (RIGHT



trict to admit a handsome factory.









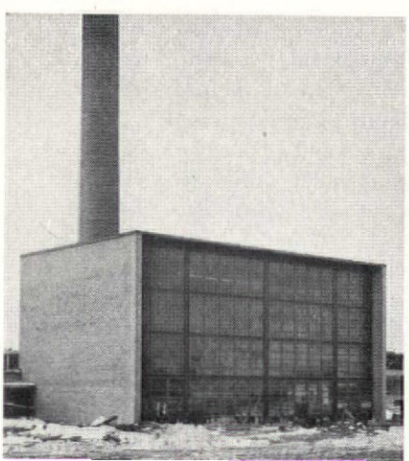


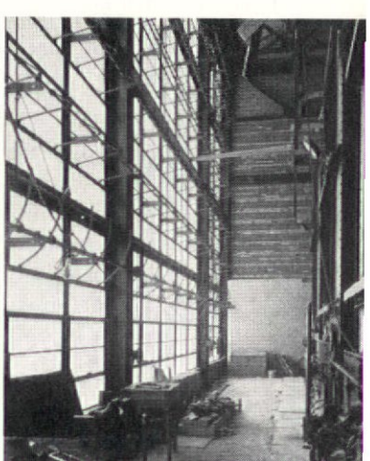
CONSTRUCTION throughout main work areas (above) is reinforced concrete with mushroom columns spaced 25 ft. on centers. Only exceptions are retail shop, garage, cafeteria and boiler house of structural steel to permit large unobstructed spans.

CONSTRUCTION OUTLINE

STRUCTURE: Tile for interior partitions—Hanley Co. Inc., Arketex Ceramics Corp. Structural steel—American Bridge Co. ROOFING—Koppers Co.; Porex by Porete Mfg. Co. SHEET METAL WORK: Flashing and gutters—16 oz. copper, Revere Copper & Brass, Inc. INSULATION—H. H. Robertson Co., and Munn & Steele. Sound insulation—Acousti-Celotex Corp. WINDOWS: Sash—Hope's Windows, Inc., Detroit Steel Products Co. Glass—Libbey-Owens-Ford Glass Co. ELEVATORS: Otis Elevator Co. FLOOR COVERINGS—tile, Hood Rubber Co., Ludowici-Celadon Co. and Mastic Tile Corp. WALL COVERINGS: Travertine—Vermont Marble Co.; Acousti-Celotex, Celotex Corp. WOOD AND METAL TRIM: Trim—Kawneer Co. Doors—Aetna Steel Products Co. and Kawneer Co.; Garage doors—Overhead Door Co.; Fire doors—Richmond Fireproof Door Co. HARDWARE: Sargent & Co. ELECTRICAL EQUIPMENT: Westinghouse Electric Corp., Holophane Co., Frink Corp., Benjamin Electric Mfg. Co., American Steel & Wire Co. Fire alarm and watchman's system—ADT Co. PLUMBING: Kohler Co., Sloan Valve Co., Church Mfg. Co., Bradley Washfountain Co. Pipes—A. M. Byers Co., Chase Brass & Copper Co., Phelps-Dodge Corp. HEATING: Forced hot water system. Converters and circulators—Bell & Gossett Co. AIR CONDITIONING: Ventilation through American Blower Co. fans; American Air Filter Co., Inc. filters and system of ducts to all shops. Burners—Todd Combustion Equipment, Inc. Radiators—Vulcan Radiator Co. Regulators—Minneapolis-Honeywell Regulator Co. Valves—Crane Co. Incinerator—Morse Boulger Destructor Co.

BOILER HOUSE (below), the only separate unit in the group, is strategically located to service future additions. It has been designed to harmonize with the main block of buildings and connects with them by means of an underground walkway.





WORK IN PROGRESS!

1200 PLYWOOD HOUSES demonstrate to Chicago

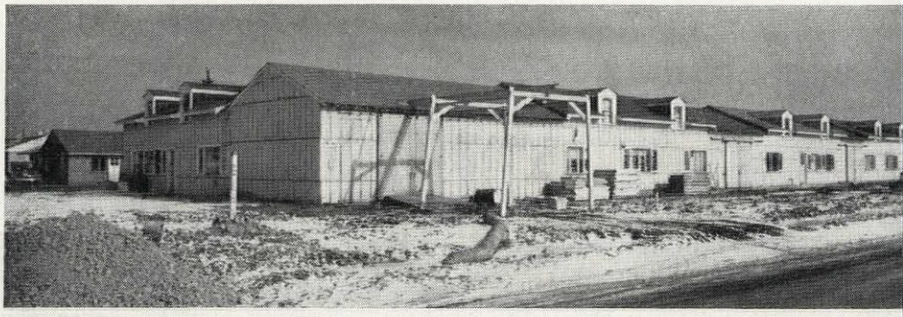
SMITH & HILL, Builders
PERKINS & WILL, Architect-Engineers

Building labor is often accused of stalling the development of prefabricated housing. Noteworthy, therefore, is the current attitude of Chicago's organized labor, which has teamed up with an enterprising operative builder and an imaginative architect to mass-produce 1,200 plywood houses which surpass the local average in all respects but price. Every four hours the closed-shop fabricating plant of Builders Smith & Hill turns out assemblies for a five-room house which closed-shop site crews put together and finish in less than 45 days. And, the price of the smartly styled, 960 sq. ft. product is only $9,200, complete with gas refrigerator and range.

There are several reasons why labor got behind Smith & Hill and is now pushing with all its might. During the past 15 years, the builders built up a stable reputation with the building trades. They are still building conventionally in two big prewar subdivisions in Chicago's north, west and west suburbs. When they decided to speed up operations via prefabrication at the new Oak Lawn site, 13 miles southwest of the Loop (close to the city's industrial belt), they first sounded out building trades officials. The latter were impressed with the appearance and relative quality of the proposed houses and the fact that these home-grown units would discourage importation of houses prefabricated by outside labor. Also pertinent, Smith & Hill are vociferous in their belief that only skilled building mechanics can produce quality houses.

With organized labor on their side, the builders of "Oak Meadows" have been able to develop site fabrication techniques to a much higher, more economical degree than heretofore permitted in the Chicago area. They have also upped labor efficiency and lowered labor cost by raising the ratio of skilled to common mechanics. Costs are further shaved by a minimum plant investment. The shop is a temporary structure, project offices and warehousing are located in the first group of houses to be enclosed, and fabrication of many assemblies is done on mobile jigs.

To insure that their houses would be attractively designed and soundly built as well as low in cost, the builders commissioned Architect-Engineers Perkins & Will to detail the entire operation. Three basic plans were developed, each featuring a huge all-purpose utility room which contains two laundry trays and a battery of closets and may serve as a study, storeroom, bedroom, workshop or playroom. Also noteworthy are the many closets in the prefabricated "space walls" and the interior finishes, which set a new high for low-cost houses.

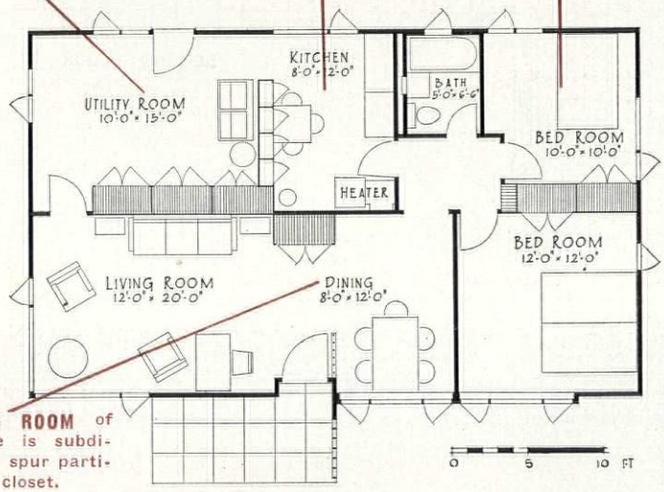


FABRICATING SHOP in center of site is comprised of five house shells, which will ultimately finished for sale, therefore represents a minimum plant investment. Panels are stored in near e of 5,400 sq. ft. shop, moved out by overhead conveyor for truck delivery to building sites.

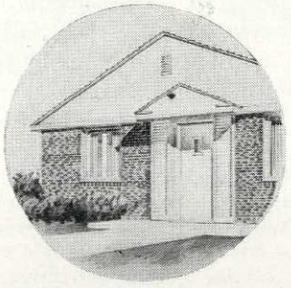
UTILITY ROOM is big, thus answers major complaint against basementless houses.

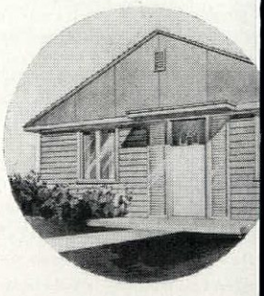
ALL-GAS KITCHEN features abundant cabinet space, folding table, access to central hall.

BEDROOMS enjoy usually large windo through ventilation ar x 4 ft. plywood closet

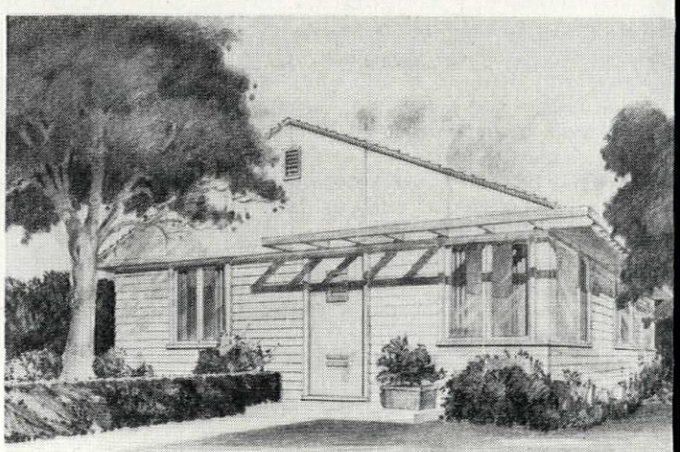


LIVING-DINING ROOM of generous size is subdivided by open spur partition and coat closet.





BASIC UNIT IS MODIFIED BY END ENTRANCE AND TRELLI



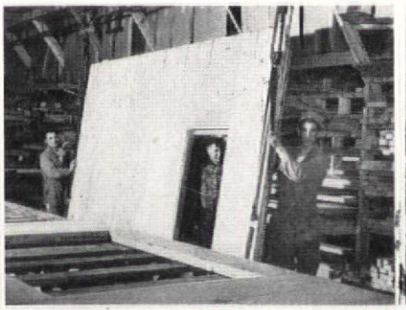
Photos by Hedrich-Blessing

ntages of site fabrication, expert architectural advice and labor cooperation.



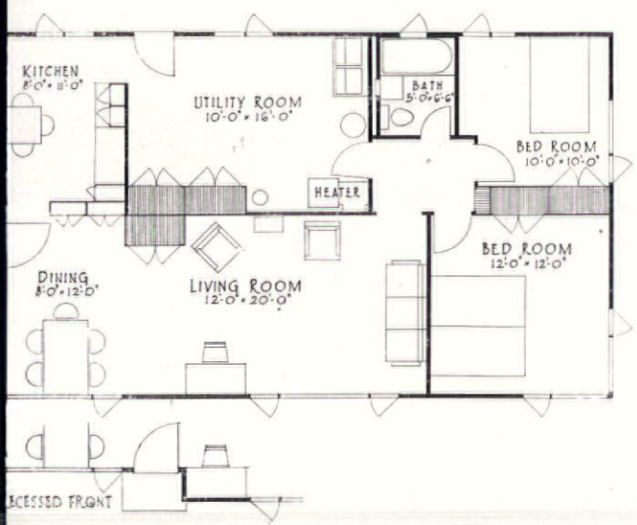


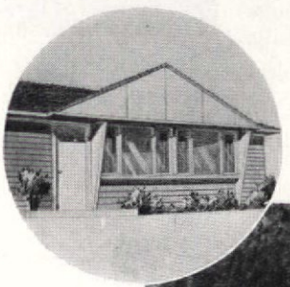
ABRICATION of panels is facilitated by storage of precut members in umbered pigeonholes opposite point of use. Sets of colored tabs on g tables align members for framing of any type panel on any table.



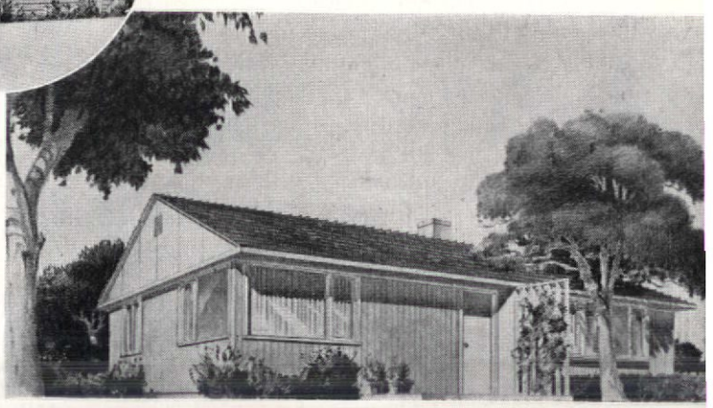


FINISHED PANELS are conveyed to storage end of shop by overhead tackle, then delivered to field, man-handled into place. Assemblies for one house (walls, partitions, roof trusses, roof and ceiling panels, cabinets) are erected in 24 man-hours.

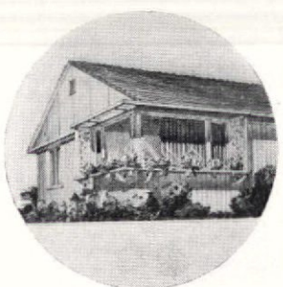




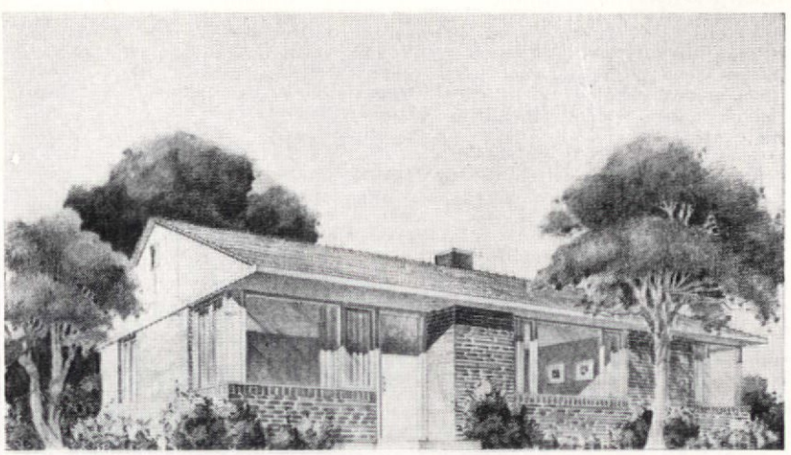
CUSTOM MODEL MAY BE VARIED WITH VERTICAL SIDING, ENTRANCE SCREEN

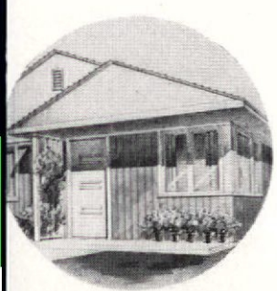






RECESSED FRONT CREATES THIRD BASIC HOUSE, WITH BRICK VENEER





UNADORNED BASIC MODEL DISPLAYS LARGE WINDOWS



DESIGN VARIATION, in conjunction with curved streets, staggered building lines (including an occasional house set askew) and a wide range of finishing materials and colors, avoids monotony in the Oak Meadows subdivision. The 1,200 houses will spring from three similar floor plans, all based on a 4 ft. module. The basic unit (immediately left) with its projecting eaves and interesting fenestration is in itself an attractive small house. To it any of many accessory window and entrance details may be added—the more elementary ones at no extra cost to the purchaser. Like the renderings on these pages, the design of the houses and the engineering of their production are the work of Chicago Architect-Engineers Perkins & Will.

Architects' smartly styled interiors belie size of Smith & Hill houses, conceal their prefabricated construct

The luxurious, big-house look of the living-dining room in Smith & Hill's small house is one of its most potent sales features and one of the most successful phases of the comprehensive design job done by Architects Perkins & Will. This 12 x 30 ft. dual-purpose area contains only the suggestion of a division. The feeling of spaciousness and luxury is enhanced by the use of large windows and mahogany-faced plywood on the walls.

Although the houses contain 960 sq. ft. and are soundly constructed, they undersell the local market by about $1,500. Smith & Hill's average $9,200 price includes a 54 x 140 ft. lot (valued at $27.50 per front ft.), landscaping, concrete walk, driveway, storm sash and screens and the pro-rated cost of site utilities and curbless macadam streets. Minimum down payment is 10 per cent; the balance is raised by a 4 per cent 25-year "packaged" mortgage covering the cost of range and refrigerator.

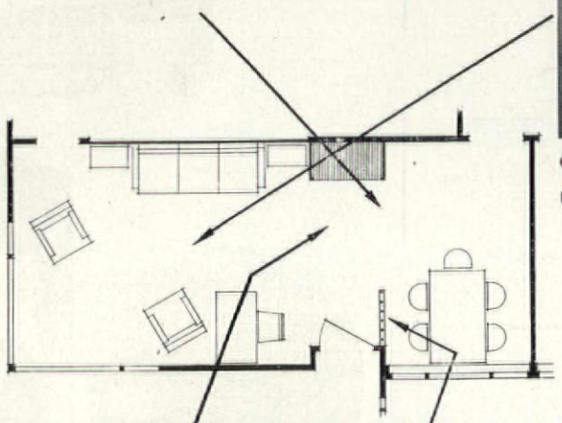
Smith & Hill began production last October and a month ago, despite slow plywood deliveries, had erected more than 100 units, including a model house expertly furnished by Marshall Field & Co. By mid-1948 the entire $10 million project should be complete, including a shopping center and community facilities.



DINING SPACE IS SEPARATED FROM ENTRANCE AND LIVING ROOM BY DECORATIVE OPEN PANEL



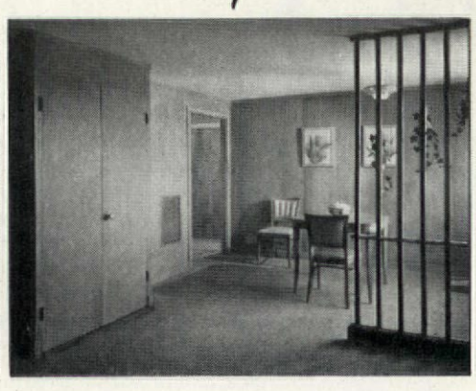
CORNER WINDOWS ARE FIXED, FLANKE BY CASEMENTS HIDDEN BEHIND DRAPE



CONSTRUCTION OUTLINE

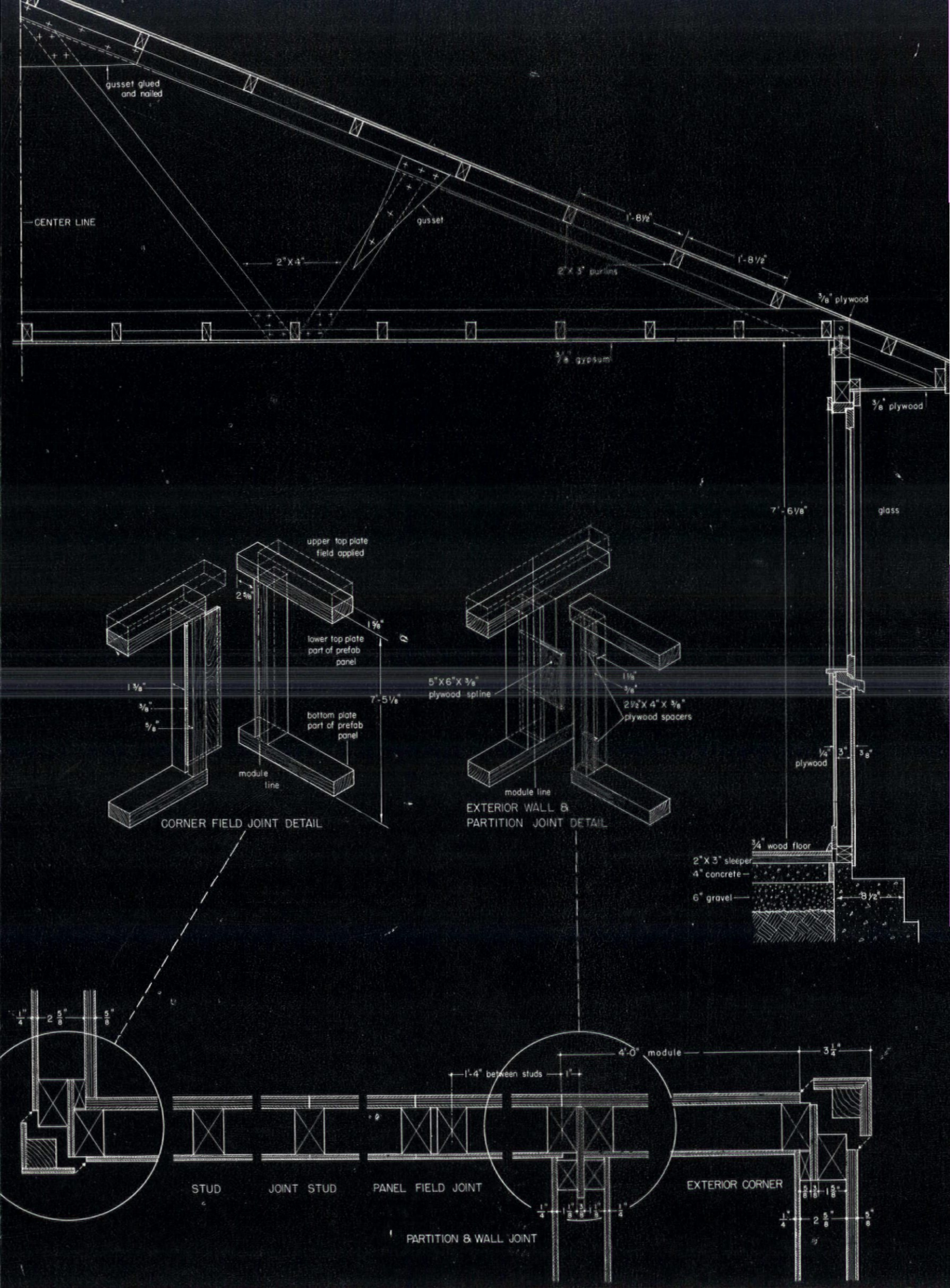
STRUCTURE: Walls and partitions—8 x 12 ft. panels of 2 x 3 in. plates top and bottom, 2 x 3 in. studs, 16 in. o.c., covered with ⅜ in. waterproofed fir plywood on exterior faces, ¼ in. fir or mahogany on interior faces, glued with Penacolite resorcinol-type resin adhesive, Pennsylvania Coal Products Co. Floors—4 in. cinders, membrane water-proofing, Sisalkraft Co., 4 in. reinforced concrete. Roof—wood trusses, 4 ft. o.c., plywood sheathing. Ceiling—plaster board panels, U. S. Gypsum Co., reinforced with glued wood members, secured to lower chords of trusses. INSULATION—2 in. rockwool in exterior wall panels, 4 in. rockwool in ceiling, Chicago Fire Brick Co. FINISHES: Exterior walls—vertical or beveled siding or brick veneer. Roof—210 lb. asphalt shingles. WALL COVERINGS: Living-dining room—mahogany. Bedrooms—Walltex, Columbia Coated Fabric Corp. Utility room, kitchen and bath—plastic sheet wainscot, Marsh Wall Products Co. FLOORS: Kitchen and bath—asphalt tile. Utility room—paint. Others—oak on sleepers. FIXTURES AND EQUIPMENT: Range—gas, Cribben & Sexton Co. Refrigerator—gas, Servel, Inc. Kitchen sink and cabinets—metal, Youngstown Pressed Steel Div., Mullins Mfg. Corp. Laundry trays and bathroom fixtures—Crane Co. Water heater, gas-fired, 30 gal.—Crane Co. and Rheem Mfg. Co. HARDWARE—Yale & Towne Mfg. Co. HEATING—gas-fired, warm air Mechanicore system, Mechanical Home Systems, Inc.







LIVING AREA BOASTS MAHOGANY PANELING AND BUILT-IN SHELVES LOUVERED DOOR IS PART OF FREE CIRCULATING WARM AIR SYSTEM


gusset glued and nailed
CENTER LINE
gusset
1'-8½"
1'-8½"
2"X4"
2"X 3" purlins
⅜" plywood
⅜" gypsum
⅜" plywood
7'-6⅛"
glass
upper top plate field applied
2⅝"
1⅜"
lower top plate part of prefab panel
1⅜"
⅜"
⅝"
7'-5⅛"
bottom plate part of prefab panel
module line
CORNER FIELD JOINT DETAIL
5"X6"X⅜" plywood spline
1⅛"
⅜"
2½"X 4"X ⅜" plywood spacers
module line
EXTERIOR WALL & PARTITION JOINT DETAIL
¼" plywood
3"
⅜"
¾" wood floor
2"X 3" sleeper
4" concrete
6" gravel
8½"
1¼"
2⅝"
⅝"
4'-0" module
3¼"
1'-4" between studs
1"
STUD
JOINT STUD
PANEL FIELD JOINT
EXTERIOR CORNER
PARTITION & WALL JOINT

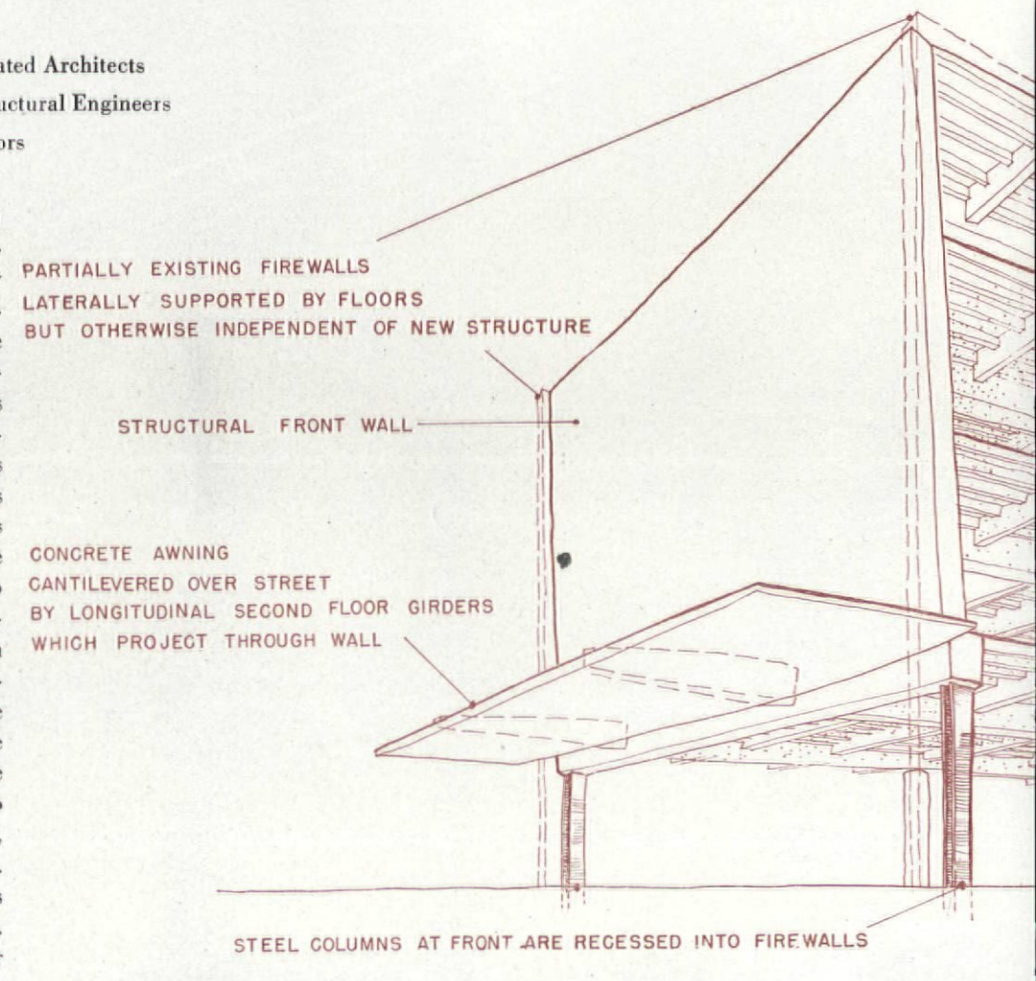
WORK IN PROGRESS!

CLOTHING STORE in Tulsa employs the "continuity princi

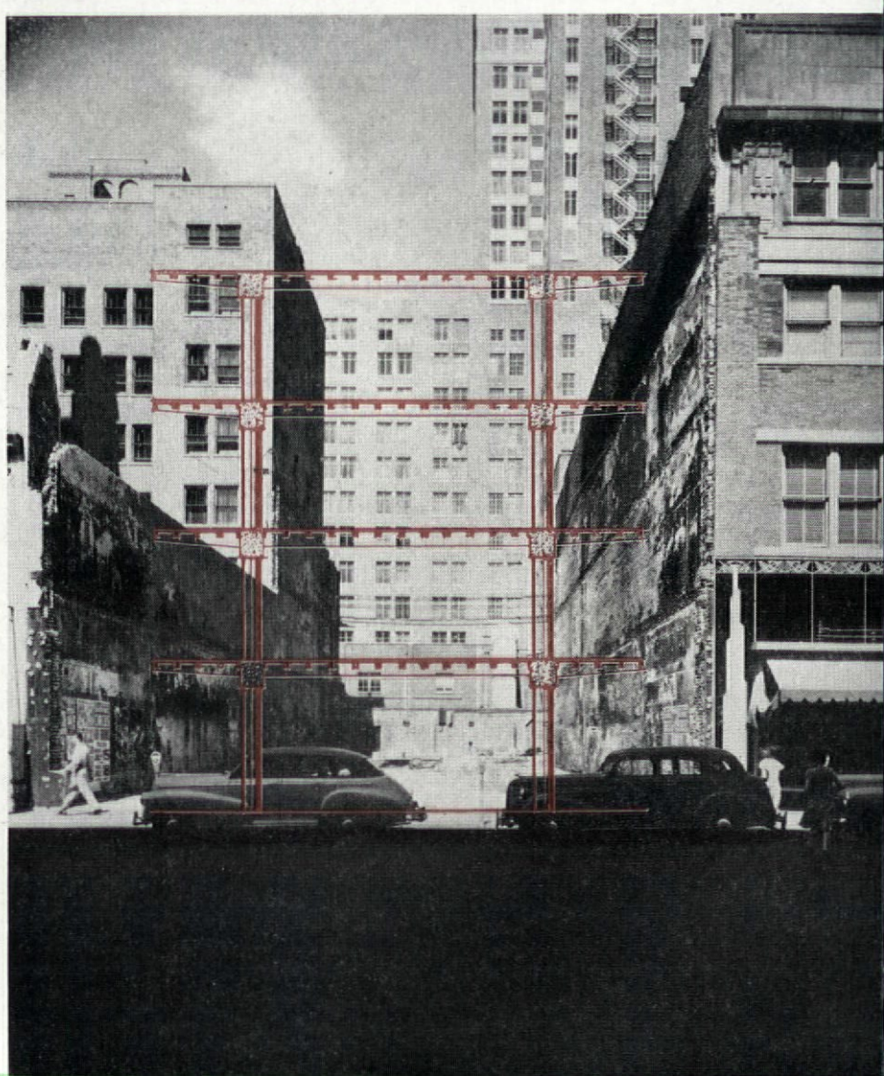
JOSEPH N. BOAZ; PARR & ADERHOLD, Associated Architects
COCHRANE, HENDRIX, FELL & WHEELER, Structural Engineers
TULSA RIG, REEL & MFG. CO., General Contractors

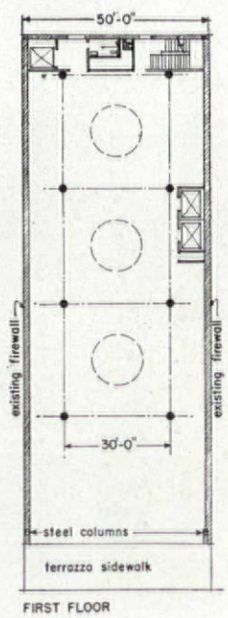
The new home of Renberg's, Tulsa (Okla.) clothing store, is a reinforced concrete structure replacing an earlier building completely destroyed by fire. Designed for structural continuity in all its parts, the new store is built like a five-level bridge, the floors and roof being carried by two parallel lines of columns and beams down the center. A framing system of intermediate beams and joists between these columns creates a series of 30 ft. bays, with a continuous 10 ft. cantilever down either side. The system is interrupted only along the street front, where the slightly tilted front wall (like a reinforced slab on end) acts as a sort of giant plate which receives all framing from the roof down through the second floor. At this point, loads are transmitted to an integral beam across the entrance and thence to two columns countersunk into the party walls. To express the structure on the exterior, the designers have cantilevered the two main longitudinal beams out over the sidewalk, where they support a spectacular concrete canopy.

Unusual as it is, this structural scheme was both logical and economical for the case in hand. It was possible to salvage the firewalls on either side by keeping the columns away from them. This also simplified footings, eliminated shoring, etc. The cantilevers do not load these damaged walls—they actually give them lateral support. Moreover, the continuity of these cantilevers reduce the moment of the large middle span and help to make the 30 ft. bays more economical. Rounded columns were used to reduce their visual importance in finished interiors.

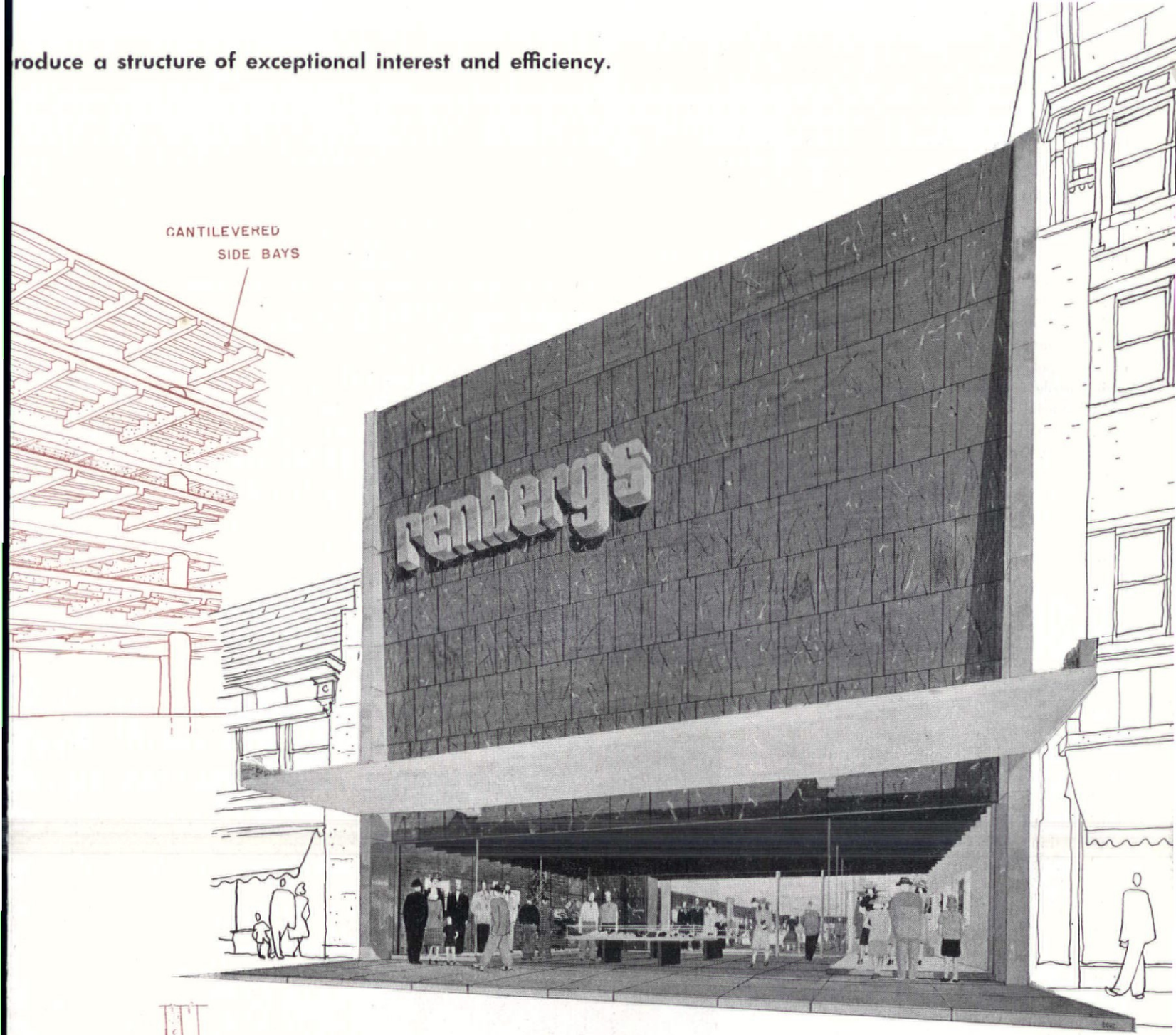


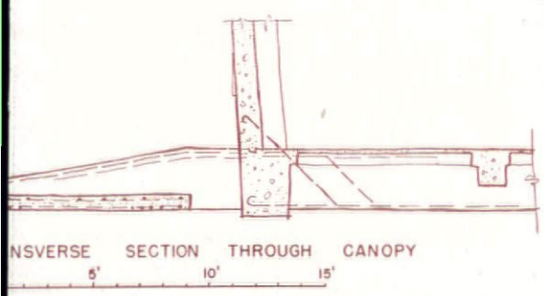
THE NEW STRUCTURE IS SLIPPED IN BETWEEN FIRE-WEAKENED PARTY WALLS

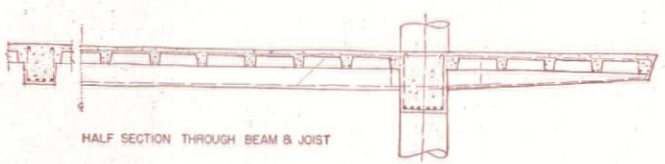


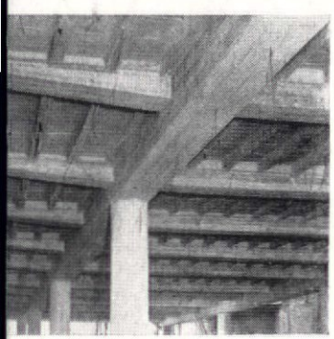


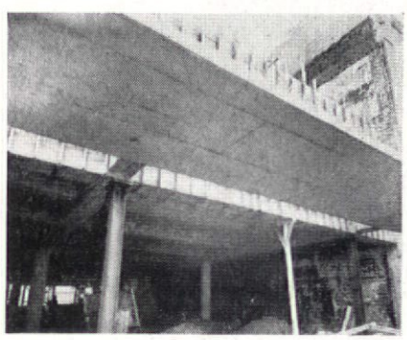
roduce a structure of exceptional interest and efficiency.

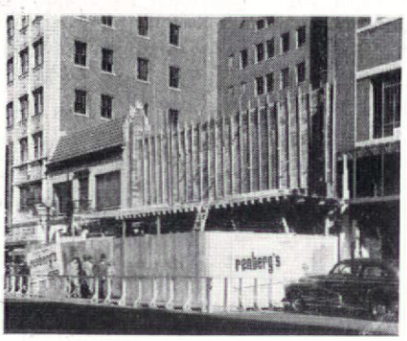












WORK IN PROGRESS!

HILLSIDE HOUSE solves a difficult problem of solar orientation.

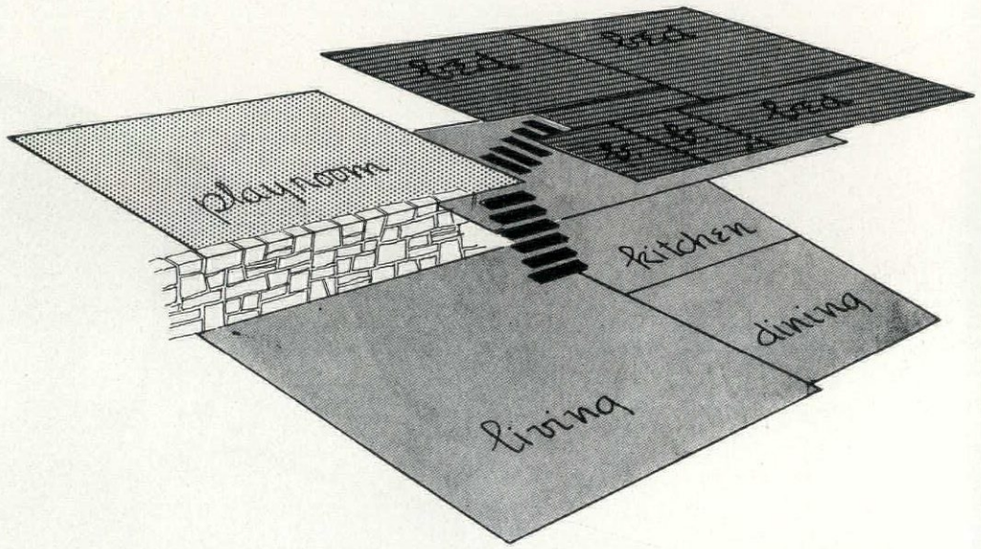
HUSON JACKSON AND JOHN HANCOCK CALLENDER, Architects
JAMES C. ROSE, Landscape Architect
JOHN WOOD, Builder

In this house for rugged Central Valley, N. Y., the architects were faced with a peculiarly difficult site problem. Because of the lack of road and water connections, the client refused to build on the summit of his hillside site. Instead he chose a spot midway up the steep north slope, which made a two-level plan essential and involved special window treatment. Since the only flat area on the site had to be utilized for outdoor living, the house itself had to fit the steeper section of the slope. An existing stone wall also influenced placement and became the starting point for the entire design. Rebuilt and running straight through the house, it serves as a separation between upper and lower levels and as a continuing outdoor terrace.

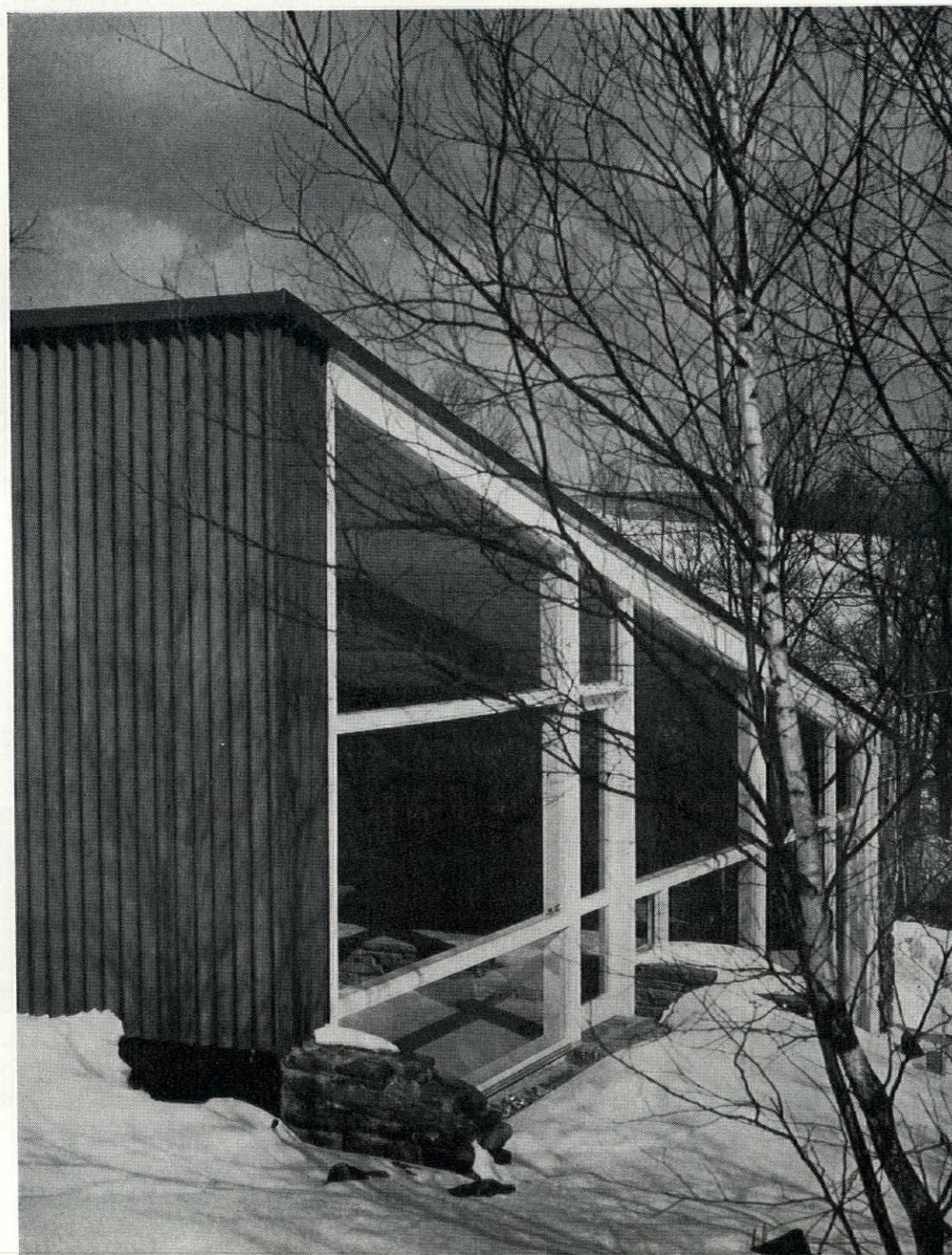
To catch the downhill sun, large windows were placed on the southern uphill exposure and the roof was slanted sharply downward. A large glass wall was incorporated on the east, taking advantage of a view toward woods and faraway hills.

An unusual feature of the design is the use of transite siding, an economical and plentiful material usually reserved for industrial building. Native bluestone has been utilized for masonry work and the roof is plank and beam, a type of construction which uses more lumber than other methods, but allows use of low-grade timber and saves labor costs.

The client originally hoped to spend only $8,000 for the house, but its final cost came to $14,500, included a number of items not originally planned. Bank appraisal placed its worth at $18,000, a differential of $3,500, resulting from savings in materials bought cheaply from derelict structures throughout the countryside.

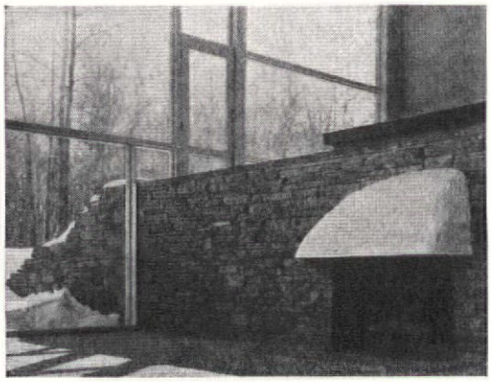


TRANSITE SIDING CONTRASTS PLEASANTLY WITH GLASS AREAS AND PAINTED WOOD TRIM



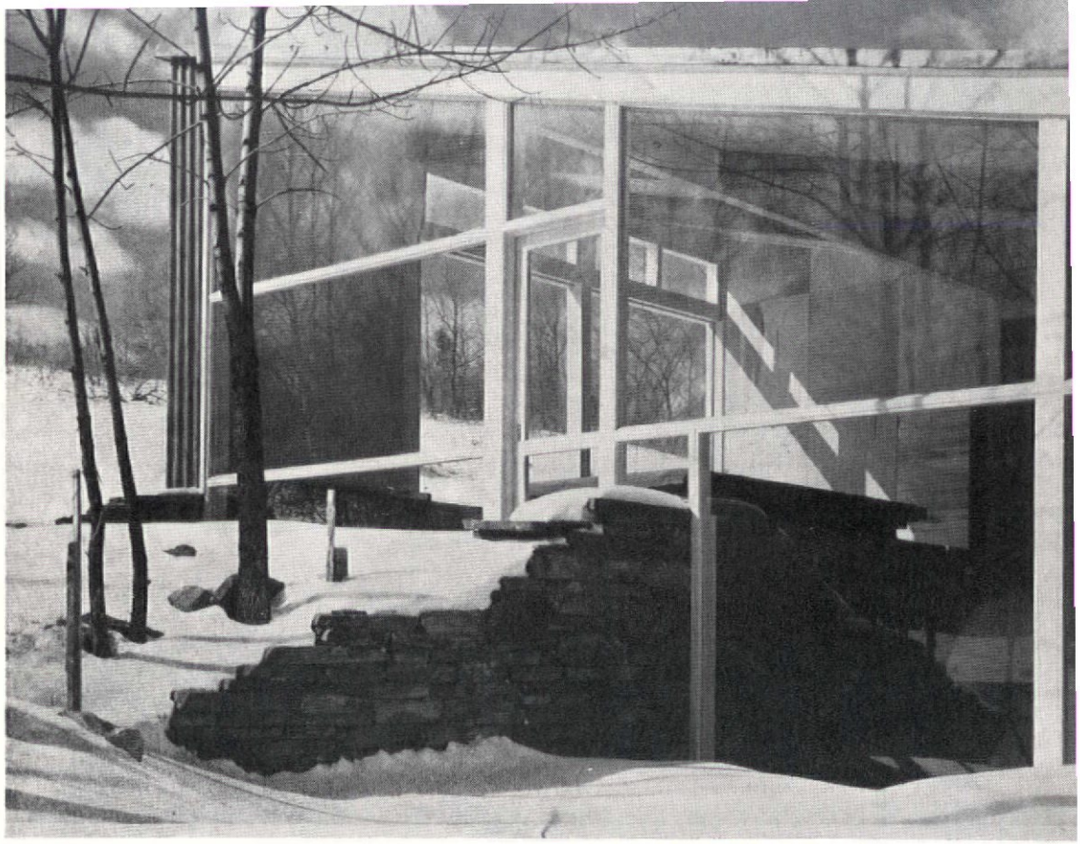
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—siding, corrugated asbestos cement, Johns-Manville, over felt; inside—studs, blanket insulation and Vaporseal, Celotex Corp., and gypsum board. Floors (1st)—concrete slab: (2)—wood. ROOF—mineral surfaced. INSULATION—Celotex Co. FIREPLACE: Damper—H. W. Covert Co. SHEET METAL WORK—16 oz. copper. WEATHERSTRIPPING—Accurate Metal Weatherstrip Co. PAINTS—Pratt & Lambert, Inc., and Breinig Bros. ELECTRICAL FIXTURES—General Lighting Co. BATHROOM FIXTURES—American Radiator-Standard Sanitary Corp. Seat—C. F. Church Mfg. Co. HEATING—radiant, oil-fired forced circulation hot water system. Circulator—Bell & Gossett Co. Copper coils—Chase Brass & Copper Co. Convectors—Warren Webster & Co. Water heater—Taco Heaters, Inc.



NOVEL HOODED FIREPLACE, LOWER LEVEL

tos by Rudolph Leppert Jr.



UPPER LEVEL OF TERRACE IS FLAGGED, LOWER WILL BE COVERED WITH PINE NEEDLES

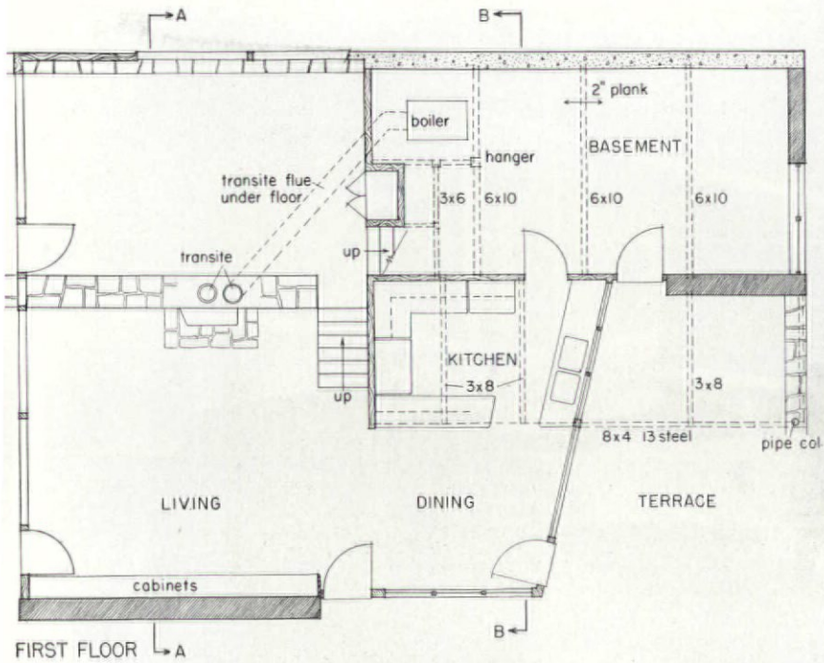


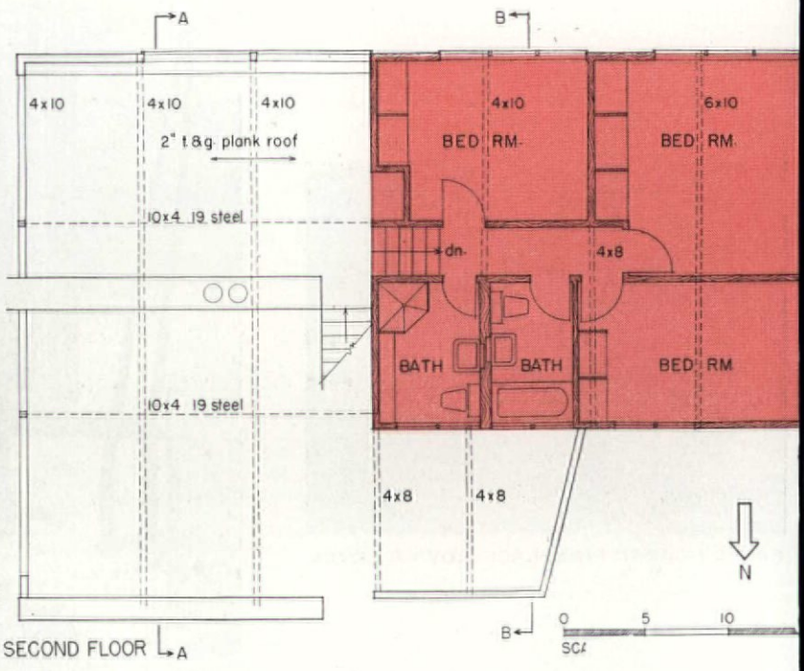
VIEW FROM EAST REVEALS SPACIOUS TWO-LEVEL LIVING ROOM. UPPER SECTION, CONNECTING WITH KITCHEN, IS USED AS DINING GALLERY



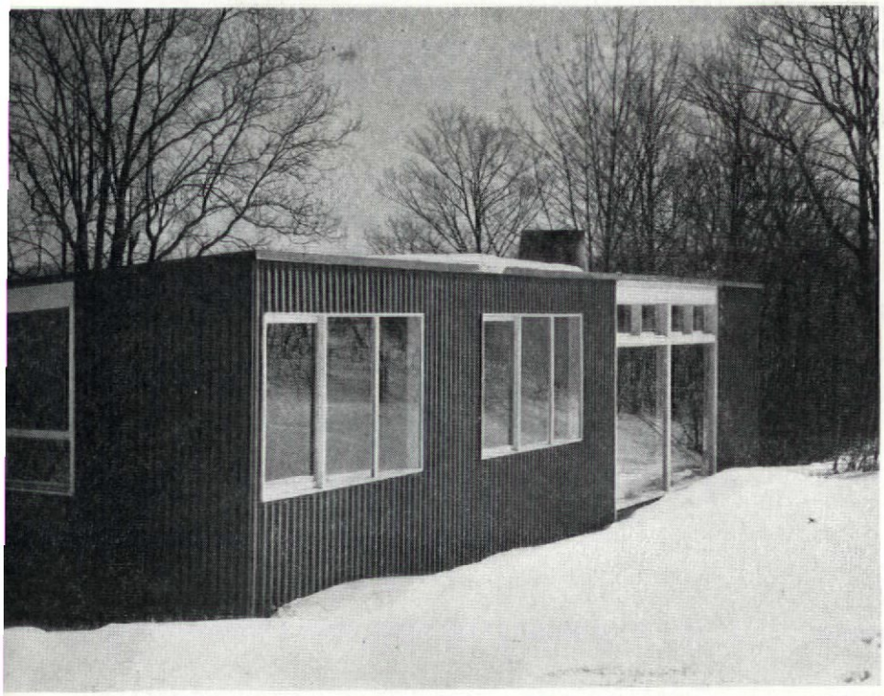


HILLSIDE HOUSE

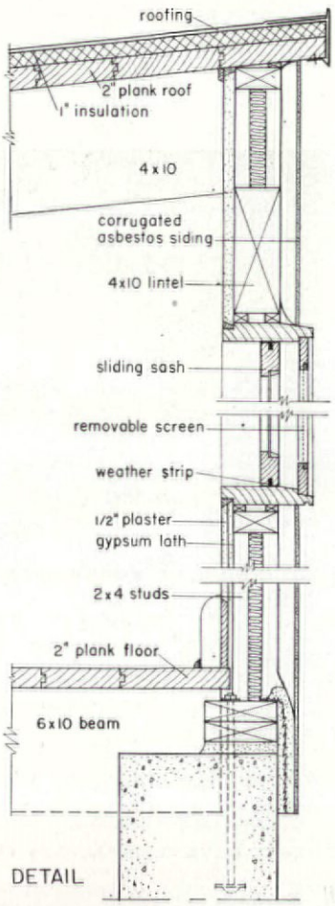




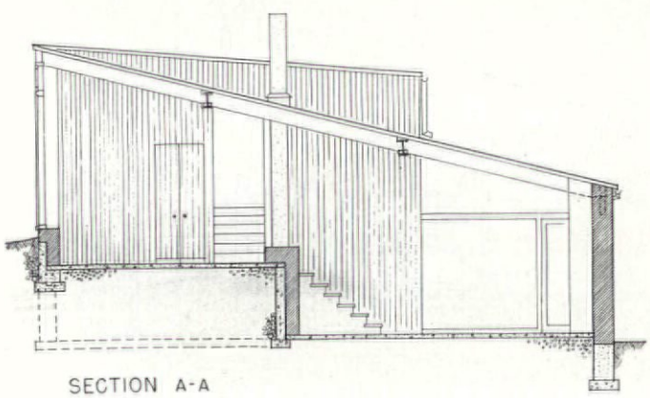
PLAN IN CLOSE CONFORMATION TO THE TERRAIN FOLLOWS A SPIRAL PATTERN ON LOWER, INTERMEDIATE AND SECOND LEVELS—ONLY THE UTILITY-SERVICE PORTION IS TWO STORIES HIGH



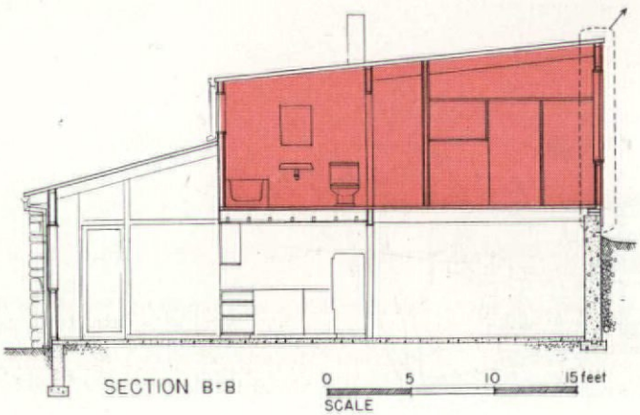
BEDROOMS AND KITCHEN ARE ON UPPER LEVEL TO THE SOUTHWEST



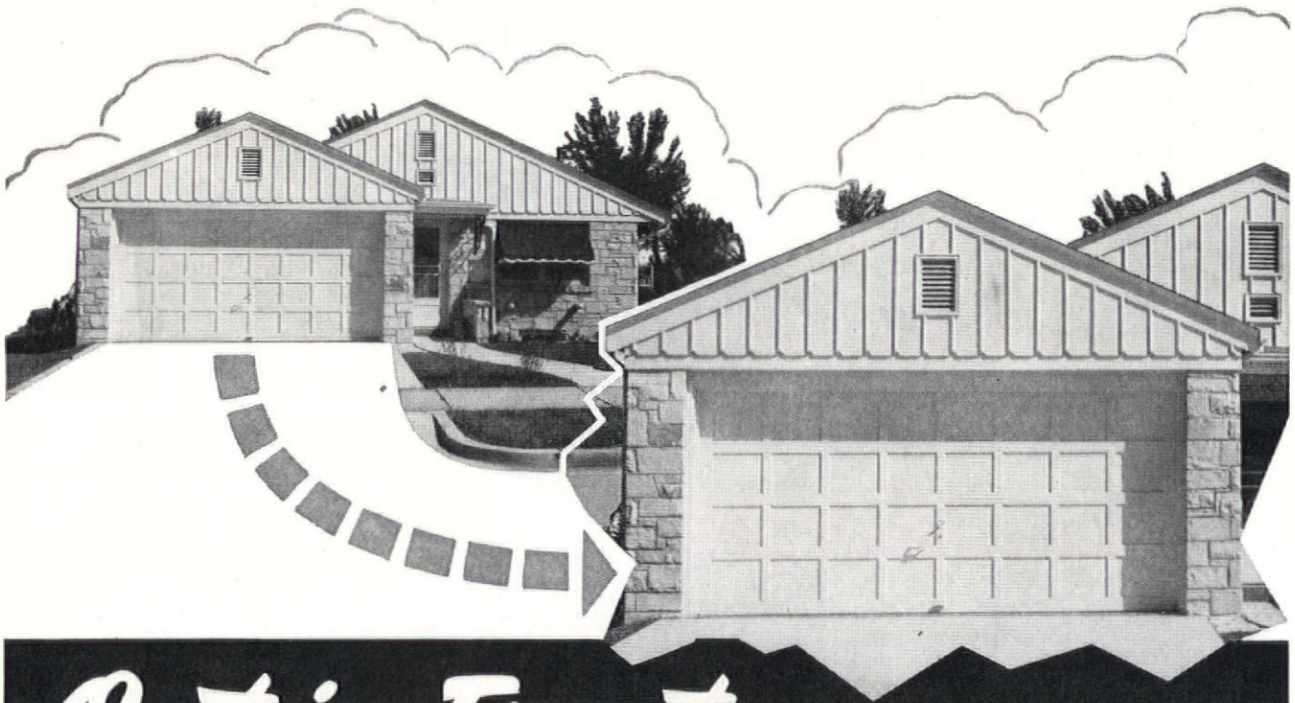
DETAIL



SECTION A-A



SECTION B-B



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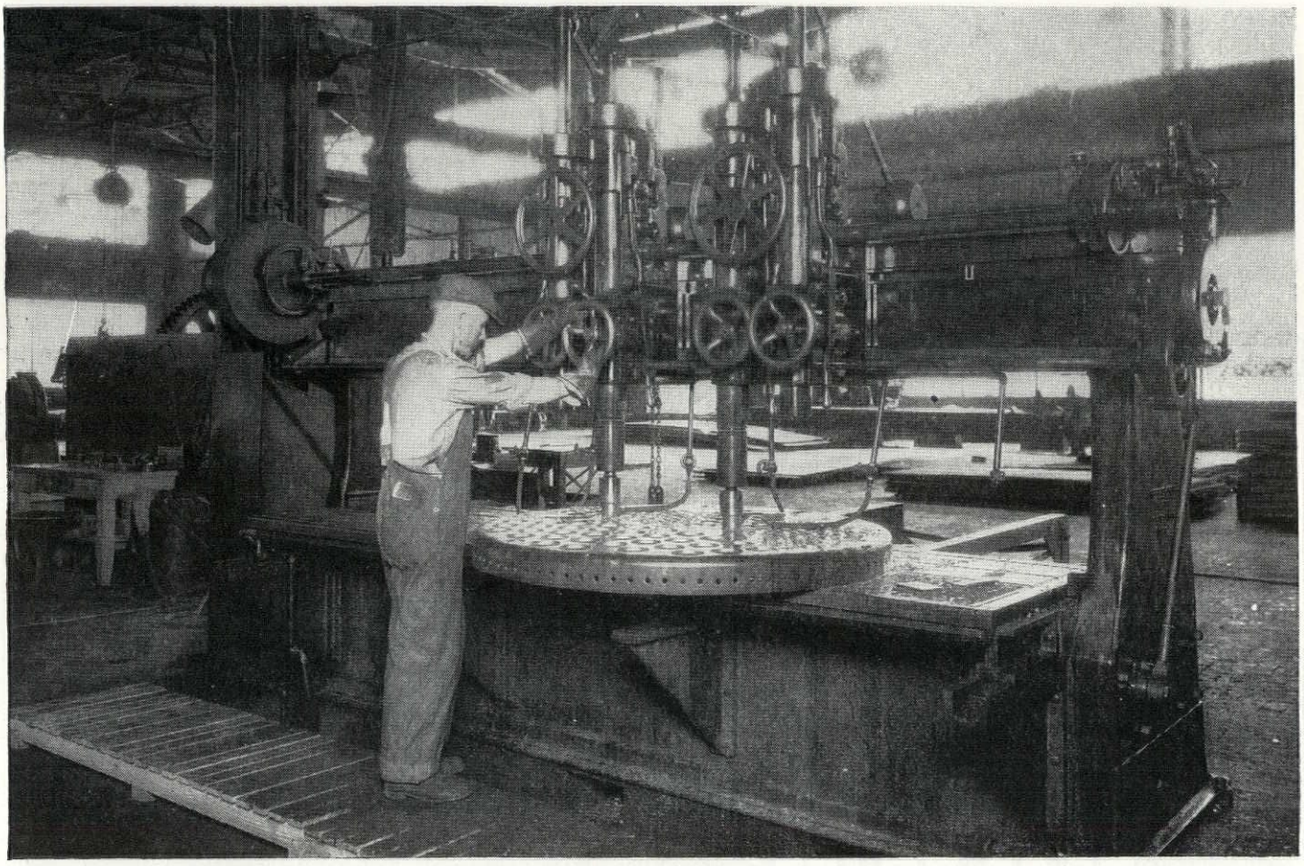
Ro-Way Doors are "out in front," too, in the years of trouble-free service they render. In any weather, they operate smoothly and easily. Ro-Way "Tailor-Made" Power Springs, Ro-Way's Friction Reducing Track, Double-Thick-Tread Track Rollers, and "Crow's Foot" Outer Bearing Support insure extra years of service. Ro-Way Parkerized and Painted Hardware add to your client's satisfaction. So for the "other front door," specify RO-WAY —the Overhead Type Door that's "out in front" in more ways than one!

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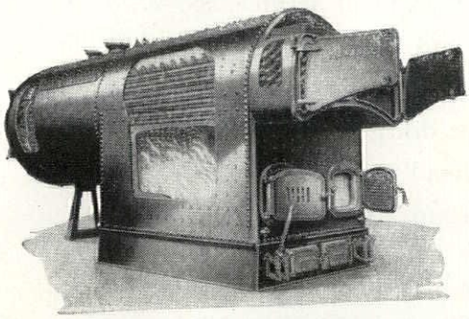
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The PLANNING BOARD



The Truscon Planning Board says, "Right now, February 15, our shipping schedules read like this: Industrial Pivoted and Projected Windows, 20 to 26 weeks; Architectural Projected Windows, 18 weeks; Open Truss Steel Joists, 8 to 10 weeks; Ferrobord Steeldeck, 18 weeks; Metal Lath Products contingent upon our ability to secure raw materials; Bank Vault Reinforcing, 8 to 10 weeks. Our suggestion is that you keep in close touch with your Truscon representative and work with him on your specifications."

Six Different Truscon Steel Building Products in this Job

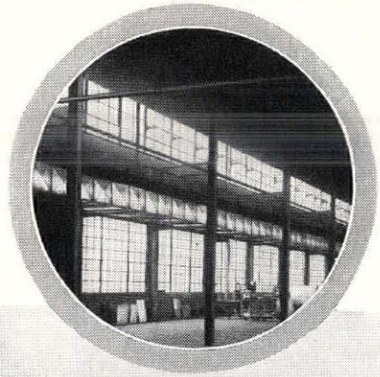
The Armstrong Furnace Company has just completed a fine new building in Columbus, Ohio, for the greatly expanded manufacture of its warm air furnaces. This well-designed structure is just about 100% steel, as far as the practical application of this material goes. R. W. Setterlin & Sons were the contractors. Truscon fabricated the structural steel members to exact specifications. Truscon "O-T" Open Truss Steel Joists permitted fire-resistant ceiling construction, especially since it was used with Truscon "Ferrobord" Steeldeck for the Roofing. "O-T" Steel Joists are very simple to install, being completely shop fabricated and reaching the job ready for placing. The "Ferrobord" Steeldeck then can be applied easily and quickly. It's adaptable to flat, pitched or curved roofs.

The Armstrong Furnace Company also makes generous use of nature's free light and air, through Truscon Commercial Projected Windows with Rack and Pinion Operators in the factory, and Truscon Architectural Projected Windows in the office building. The Commercial Projected Windows were used to reduce the hazard of accidents by trucks moving materials. The material handling trucks move very close to the inside wall of the building and any part of the window ventilator extending inward would create a potential accident risk. Thus the projected window with the ventilator projecting outward eliminates this hazard.

Efficient erection and completed enclosure of the structure was speeded considerably by the precision-made units fabricated in the Truscon factory, each item being made to fit without on-the-job retailoring.

If you are planning any kind of structure, it will be to your benefit to ask your Truscon representative to show how Truscon's complete line of steel building products and service can make your job easier and simpler. Truscon is the world's largest manufacturer of a complete line of steel building products.

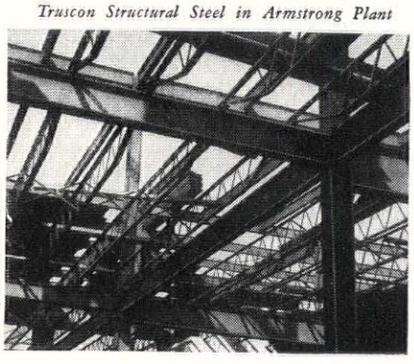
Truscon Commercial Projected Windows from Interior of Armstrong Plant



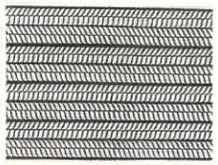


Exterior View of the Armstrong Furnace Company, Columbus, Ohio, Showing Truscon Architectural Projected Windows in Office Building.

Truscon Structural Steel in Armstrong Plant



Metal Lath Products



*Truscon Doublemesh *Herringbone Metal Lath*
**Reg. U. S. Pat. Off.*

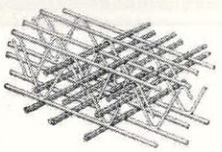
The recent series of fire tragedies in public buildings throughout America has pointed strong attention to fire-resistant construction. Truscon Metal Lath products are recognized by authorities for their fire-resistive qualities, especially for schools, hospitals, theaters, hotels and other buildings in congested areas. Truscon has a wide range of types of metal lath, corner beads, stucco mesh, corner reinforcements, hollow partition studs, base screeds, cold rolled channels and other products related to the plastering trades. All Truscon Metal Lath products are manufactured in accordance with U. S. Department of Commerce Simplified Practice Recommendation R 344. Write for free catalog showing the complete line, or refer to SWEET'S.

Truscon Adds New Metal Lath Accessories

Within the past few weeks Truscon has added equipment to fabricate short and wide flange bull nose corner beads, special base screeds, picture mold and casings. The addition of these products will enable Truscon to furnish a more complete line of Metal Lath Accessories. More about this later.

Bank Vault Reinforcing

Where protection against unauthorized entry into a single room or an entire structure is paramount, use Truscon Welded Reinforcing. It assures maximum economy in the placing of construction materials, maximum efficiency of materials in resisting penetration, and No. 10 insurance rating.



Truscon Welded Bank Vault Reinforcing consists of welded steel units placed parallel to each other with their chord members forming a barrier of steel near the inner and outer faces of the walls, floor and ceiling slabs. The web members of the welded units provide reinforcement through the thickness of the concrete. Loose bars threaded through the welded units form rectangular barriers of steel at both inner and outer faces of walls, floor and ceiling slabs as well as providing a transverse barrier through their centers. All walls are securely bonded together at the vertical corners by means of specially formed dowel bars. Write for new folder giving complete description of Truscon Welded Bank Vault Reinforcing.

New Literature

A new 32 page catalog on Truscon's complete line of steel doors is now available. Includes illustrations, installation details and specifications. Write for your copy today.



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No extra time is required to use Medusa Waterproofed Cements —no extra supervision—no added labor. These cements are mixed and placed exactly as ordinary cements, but they make concrete that is safe from water damage—a bonus for your clients. Specify Medusa Waterproofed Cements*— White or Gray — for mortar, for plaster coats on interior walls, and for scratch and brown coats as well as finish coats in stucco. The slight additional cost of waterproofed construction now is only a fraction of the cost entailed to correct water damage later. Be safe—specify "built-in waterproofing"—the Medusa way.

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PRINCETON CONFERENCE

Digest of informal discussions on Planning Man's Physical Environment, held at Princeton University March 5-6, 1947.

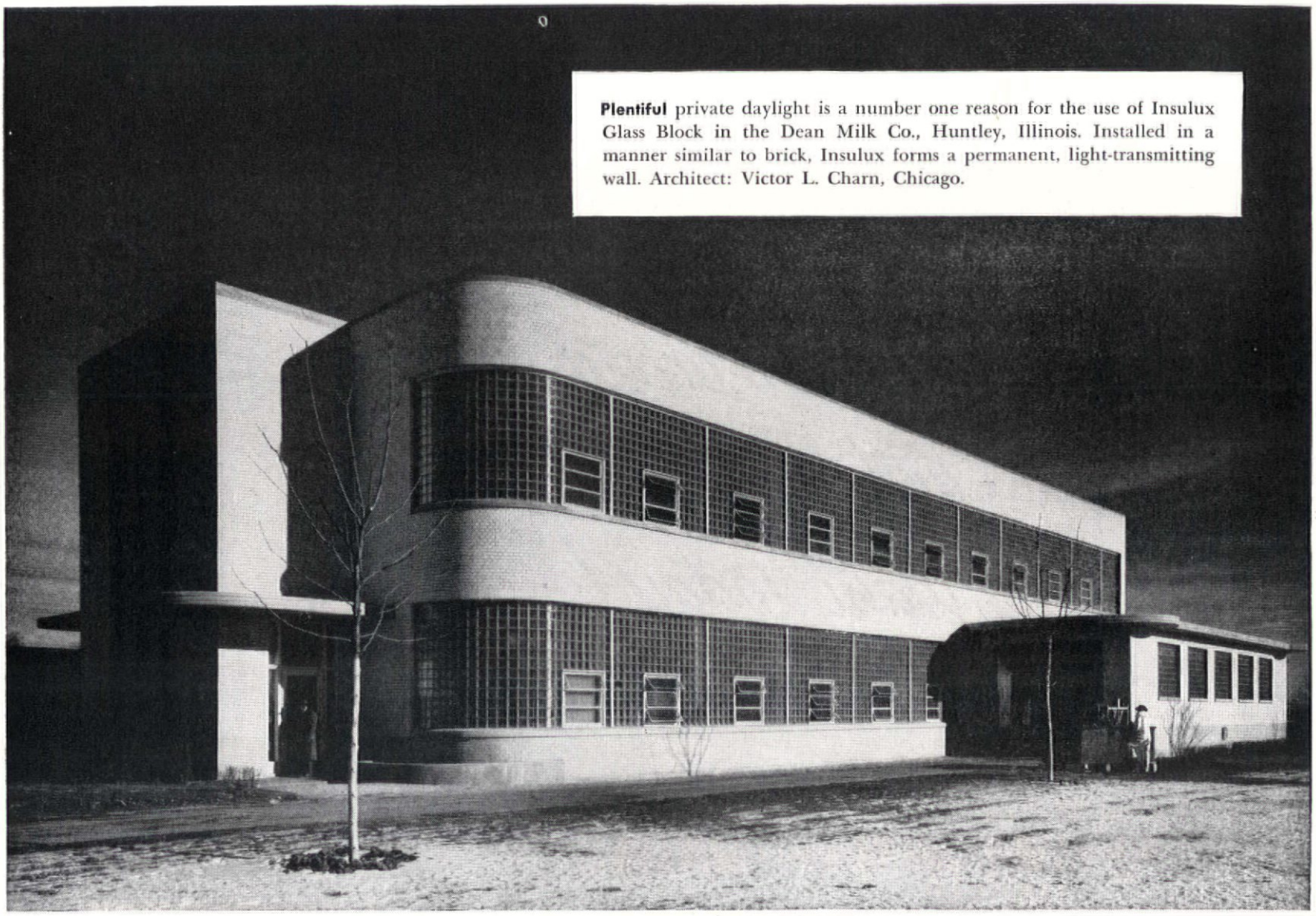
The first Wednesday morning session was on **The Visual and Social Basis of Design.** *William Roger Greeley:* "Those of us who started our education in the last century lived in a time of complaisance." *Carlos Contreras:* "I stress the point that we have to simplify our lives instead of complicating them." *Arthur Morgan:* "The architect today in his city work is really building monuments in a graveyard."

George Howe: "Mr. Greeley spoke about conforming to the past . . . This has been going on for many years . . . when the banker's wife had to escape from the community that her husband had made untenable . . . I read England's Uthwatt Report. To the extent to which that report does not advocate taking possession of the land, it does advocate taking possession of its speculative value . . . It is impossible to have planning as long as the National Association of Real Estate Boards controls the real estate of America. I think this conference should place itself well behind the initiation of an American Land Act whereby the power will be taken away from the real estate boards . . . I do not think the banker is competent to handle money. In this I agree with Jackson, Jefferson, if not Hamilton . . . I think mortgages should be taken away from the bankers." *Catherine Bauer Wurster:* "George Howe gave me such a good opening, I will go on from there . . . We need professional leadership . . . On the national level architects in America as a professional group have not taken any important role of leadership . . . since the last war when Charles Whitaker, Clarence Stein, Henry Wright, Elmer Wood, Lewis Munford and others gave real leadership . . . Recently the A.I.A. has been thoroughly reactionary on national policy and has really had no program at all. I won't go into the old story of the New Deal legislation. But last year on the Wagner-Ellender-Taft bill it looked as though the A.I.A. was reactionary . . . If you want to take up George Howe and really form some leadership on a planning bill, you can make the Wagner-Ellender-Taft bill sound as though it had been written by Coolidge, Harding, and . . ." (from the floor: "Herb Nelson".)

After a 15-minute breathing spell, the second morning session took up **Physical Possibilities and Limitations of Design.** *John Burchard, Chairman:* "There are times for advance, times for consolidation . . . Today the architect is designing at the end, not at the beginning." *Walter Gropius:* "I foresee a future when the architect and builder will find on the market a great variety of component parts of houses which can be assembled in different forms . . . The need, of course, is a standardization of dimensions. We have to base it biologically, from the human body . . . If you look back into any New England village, in the handwork time, you had I wish the key word of our conference would be standardization."

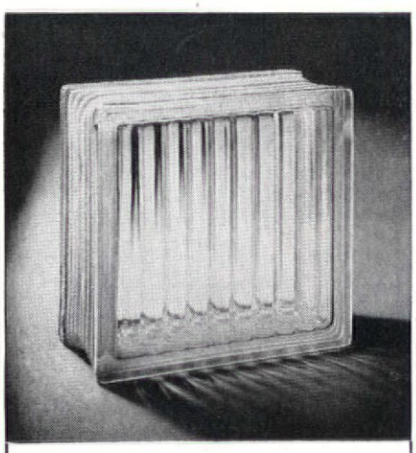
Ernest Kump: "Architecture will never plan man's environment until we know man. And we will never know man until we know that he cannot be fully felt by the test-tube and tapemeasure." *Ralph Walker:* "While I agree in the sense of the 4 in. module, there are larger modules: the module of use." *Konrad Wachsmann:* "Before we specify dimensions and standards we have to solve one other problem: the joint relationship between elements and bodies." *Serge Chermayeff:*

(Continued on page 136)



Plentiful private daylight is a number one reason for the use of Insulux Glass Block in the Dean Milk Co., Huntley, Illinois. Installed in a manner similar to brick, Insulux forms a permanent, light-transmitting wall. Architect: Victor L. Charn, Chicago.

Permanent answer to daylighting problems



OWENS-ILLINOIS

INSULUX

GLASS BLOCK

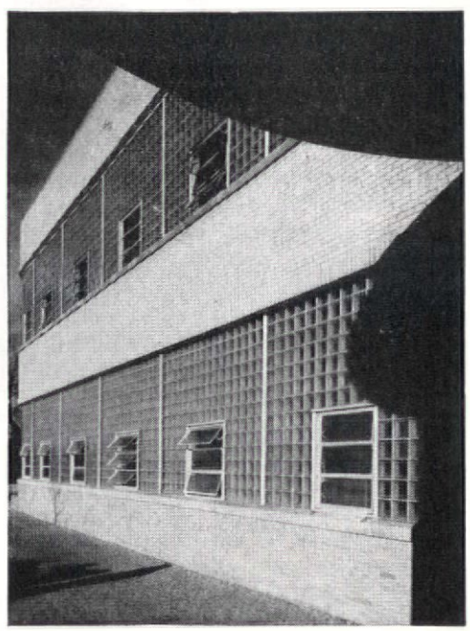
Insulux Glass Block is a functional building material, manufactured in three sizes, many attractive and functional face patterns. Investigate.

PLENTIFUL daylight pours into the new Dean Milk Co. building through panels of Insulux Glass Block—which also *permanently* solve other important problems.

Here, sanitation is a prime concern. Insulux Glass Block seals out dirt and dust and it's easy to keep the panels clean and sparkling. Even if humidity is excessive, impervious Insulux will not rot, rust or corrode and there's no need for painting.

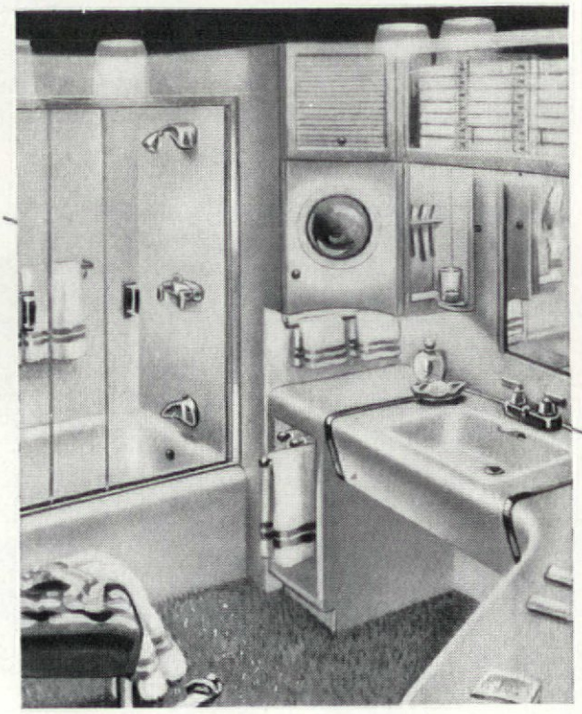
High insulating value is an important plus feature. Heat gain and heat loss are sharply reduced as compared to single glazing. The result: lower cost air conditioning and heating operations, and reduction of condensation on the room side.

These advantages are a few of the many that have made Insulux Glass Block so widely and well used in industrial, commercial and residential construction. Complete technical data, specifications and installation details are given in the "Glass" section of Sweet's Architectural Catalog, or write Dept. D-16, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.



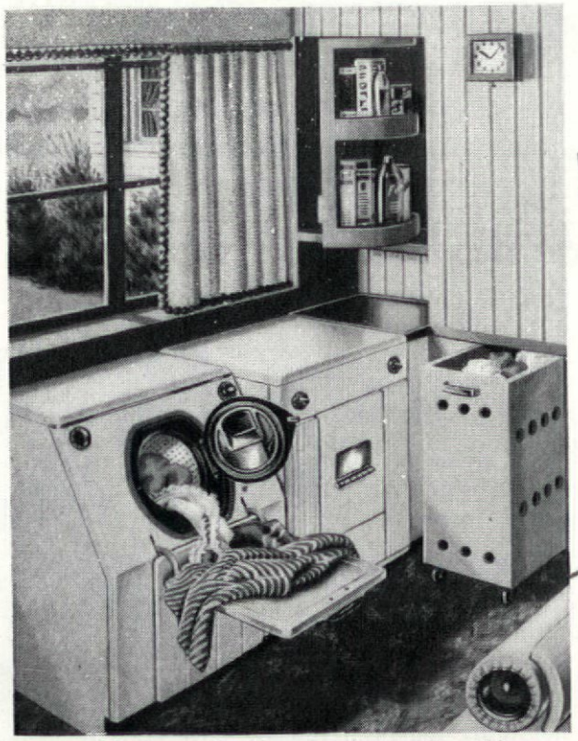
Harmony of Insulux Glass Block and other building materials is readily seen here. Small clear windows, set in the panels with standard frames, provide vision out and ventilation.

Build for tomorrow with what they want today!

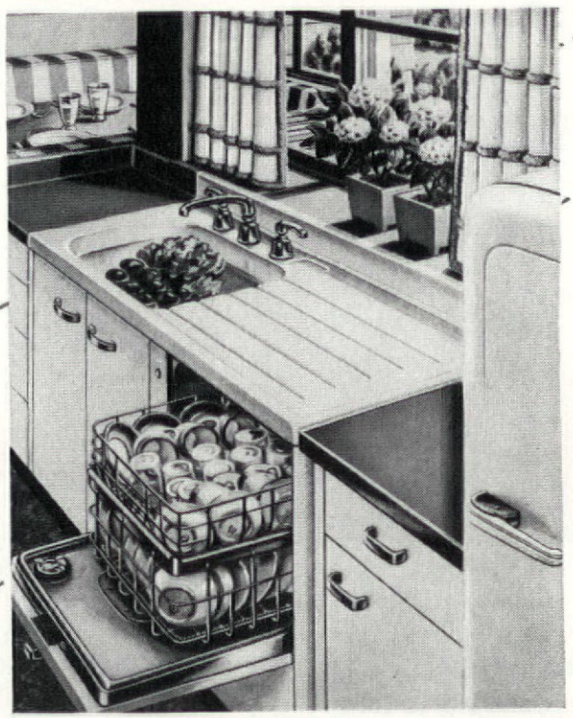


Important for modern comfort. Baths, showers, shaves are just three of the 140 household uses for hot water made easier and more pleasant by the always-on-tap hot water from an automatic Gas water-heater.

Where automatic gas water-heating is a modern "mu



Essential in the modern laundry. Automatic washing machine manufacturers themselves recommend Gas heated water for best results. Because—an automatic Gas water-heater provides the most practical way of getting *quick-recovery* hot water in sufficient quantity—economically!



Vital to a modern dishwasher. To be efficient, the new dishwashers must have plenty of high temperature water. An automatic Gas water-heater is the only *economical* system that gives this kind of constant hot water supply.

Why an automatic gas water-heater is wanted "most"

Most reliable . . . Gas for water-heating enjoys a record for continuity of service unrivaled by any other fuel. It is dependable. Needs no fuel storage. Is less liable to interruptions. Delivers adequate supplies of hot water at any desired temperature with a minimum of repair and adjustment!

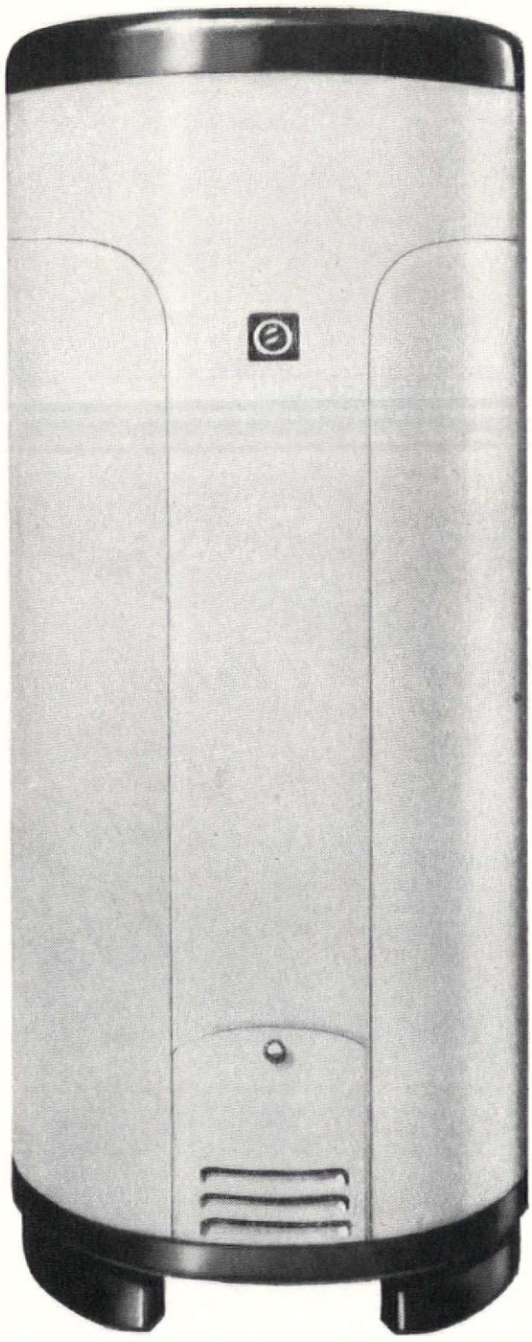
Most convenient . . . An automatic Gas water-heater requires no running downstairs to light up, no watching, no waiting. It is controlled by an automatic thermostat which maintains *really* hot water in a heavily insulated tank and turns Gas off when need has been satisfied.

Most economical . . . An automatic Gas water-heater uses the *exact* quantity of fuel needed — no more! Waste of both water and fuel is reduced. Costs less to purchase, for *faster recovery* means smaller storage capacity is required for any given amount of hot water. And it operates with uniform economy all year 'round!

GAS

FOR THE LAST WORD IN AUTOMATIC WATER-HEATING

AMERICAN GAS ASSOCIATION



t to watch for in specifying automatic gas water-heaters

ze . . . Be sure heater is large nough for client's needs! Check ze of family, number of bathooms, amount of home laundry, nmediate prospect for other autoatic equipment requiring hot water.

ype . . . Recommend fast recovery torage heater for best all-round ervice. It is the most modern methd of assuring continuous hot water 4 hours a day . . . and a must here automatic dishwasher or cycle washing machine is installed.

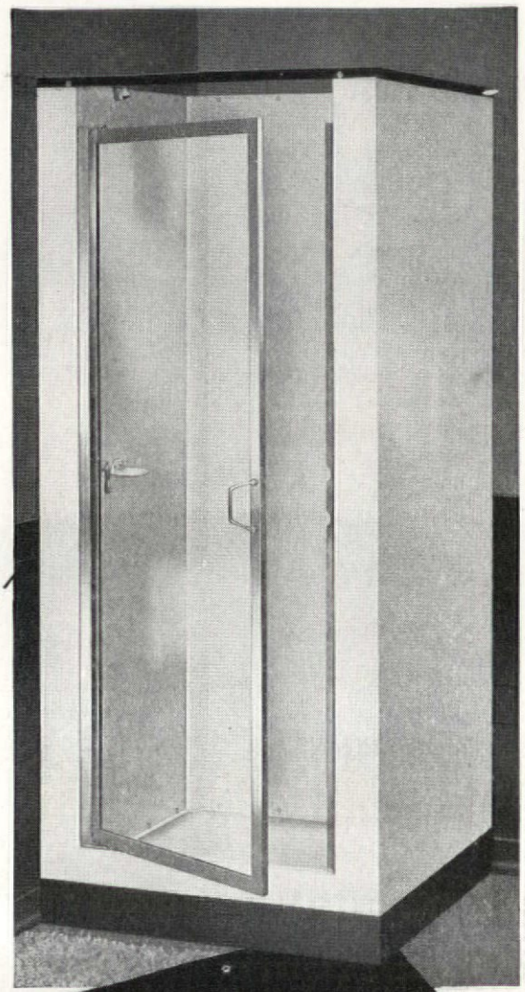
3. **Placing** . . . Specify position of heater so that there is a minimum loss of heat from heater to point of use. And place close to flue.

4. **Seal of Approval** . . . Insist on only those automatic Gas water-heaters which have been tested and approved for safety, durability and efficiency in the Laboratories of the American Gas Association.



Remember!

Automatic Gas water-heaters benefit you as much as they do your clients. They take up little building space... need only the simplest connections . . . yet add greatly to the popular appeal of today's homes. Most important of all, they build customer satisfaction! For like all modern Gas appliances — such as automatic Gas ranges built to "CP" standards, automatic Gas refrigerators, automatic Gas space heaters and year 'round Gas air-conditioning — these ultra-efficient Gas water-heaters enhance the value of any home... add stature to your reputation as designer and builder of *livable* living units! For technical details, see your local Gas Company.



SPECIFICATIONS

Frame—One-piece heavy aluminum alloy.
Jamb—Heavy aluminum alloy.
Hinge—Reversible, can be installed right or left without special drilling.
Catch—Bullet type.
Handle—Offset design on both sides.
Finish—Anotized aluminum.
Size—24"x60", for opening 24" wide.

A NEW GLASS SHOWER DOOR

Fiat Low Door

... has exclusive reversible hinge feature. Can be installed either right or left hinging without special drilling * * * The smart distinctive appearance of this new shower door puts any shower installation in the luxury class, yet its cost is the lowest of any door Fiat has produced. The frame and jambs are the typical solid sturdy Fiat construction built to last a lifetime. A new type of hinging arrangement, with door hung on a heavy pin top and bottom, eliminates the expensive piano hinge. * * * Illustration shows the new Low Door and Fiat Skipper shower, a combination of unusual values that cannot be equalled for low cost bathroom installations.

Fiat Metal Manufacturing Company
CHICAGO 13, ILL.
LONG ISLAND CITY 1, N. Y. LOS ANGELES 33, CALIF.

"I must say I register utter confusion."

In the afternoon session, the subject was **Philosophy of Form and the Psychological Effect of Form.** *Adelbert Ames, Jr.:* "If the only reason man created artifacts is to carry out his purposes, the form of the artifact should be such as to disclose visually what it is useful for." *Theodore Greene:* "As someone said at lunch today, the past, the present and the future are like a cantilever; you have to have as much weight in the past in order to carry the future." *Richard Bennett:* "It depends on your foundations in the present." *Sigfried Giedion:* "Esthetic values are not trimmings; they reach into the shaping of cars, of bridges." *Hadley Cantril:* "Every impression takes place within some referential frame resulting rom experience . . . There is not any absolute standard . . . As for Giedion's remark on social lag . . . that can be correlated with Ames' that there is no common sensation for individuals but individuals can have common purposes."

Jose Sert: "Most of us here are architects interested in planning, or planners interested in architecture . . . We need contact with the outside, with industrialists, with all kinds of men . . . I feel there should be teams of specialists from the post-graduate schools who work with engineers, sociologists, with people who have to do with planning . . . Also, teaching through visual means." *William Wurster:* "It seems to me we express too much fear against standardization . . . It is not what the room is, but what you do in the room that counts."

The evening session reviewed the day. *Kenneth Kassler, Chairman:* "The theme which has run through all of today's discussions is that the larger aspect of architecture has dealt with the human body as a unit of measurement . . . If we arrive at some unity—of the human figure, of the spirit—we will have accomplished something." *Louis Justement:* I make a rebuttal to Mrs. Wurster's remarks about the A.I.A. this morning . . . All of these things take time." *Frank Lloyd Wright:* "I heard a lot here tonight about this union called the A.I.A. I'd like someone to rise and tell me succinctly and precisely just what the A.I.A.—this union—wants and thinks it is doing." *George Howe:* "Well, Frank, the A.I.A. sets up a thing which is called a code of ethics. What they have actually set up is the law of self-preservation." *Roland Wank:* "I think it is very dangerous to believe the public needs more education. I think it is likely they will take the bit in their teeth and run away from us. In dealing with rural groups, I found no difficulty in palming off what Mr. Wright would recognize as 'modern' . . . We would say, 'What kind of building would you like?'" *Frank Lloyd Wright:* "You are the only architect I have heard of who *asked* his client. *Tell* him! Treat him rough!" *Arthur Morgan:* "Decentralization isn't enough . . . I don't care how secure man is, he needs adventure." *Frank Lloyd Wright:* "What he needs is architecture."

Thursday morning's session was on **Extensive Environment.** *Henry Churchill, Chairman:* "One of the difficulties of the planner is that each individual tries to emphasize the phases of a problem that his own temperament suits him for . . . I am getting the idea that the planning professions should hire Eddie Bernays to take over." *Theodore McCrosky:* "We cannot plan for the abandoning of all our great cities. They have meaning as the center of culture and civilization . . ." *George Grey Wornum:* "A common factor underlying many of the plans (in England) is the new neighborhood unit giving dignity to the common man . . . not just a unit containing residences, but all the amenities of communal buildings."

(Continued on page 140)

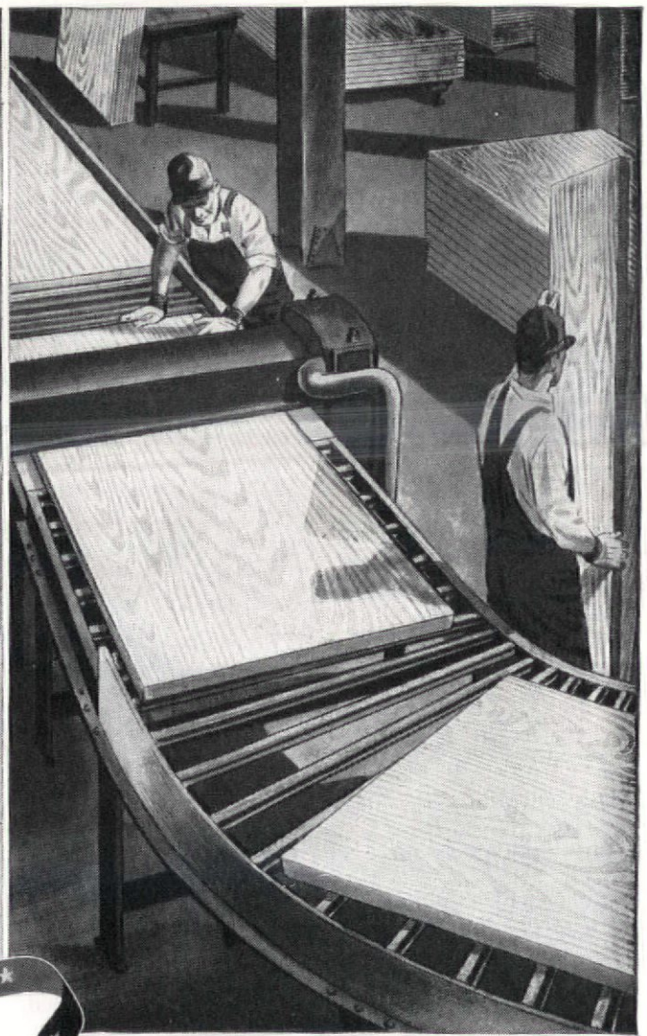


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Percentage-wise, it's quite a dividend. By concentrating all our production on stock size doors and plywood, production can be increased a minimum of one-third.

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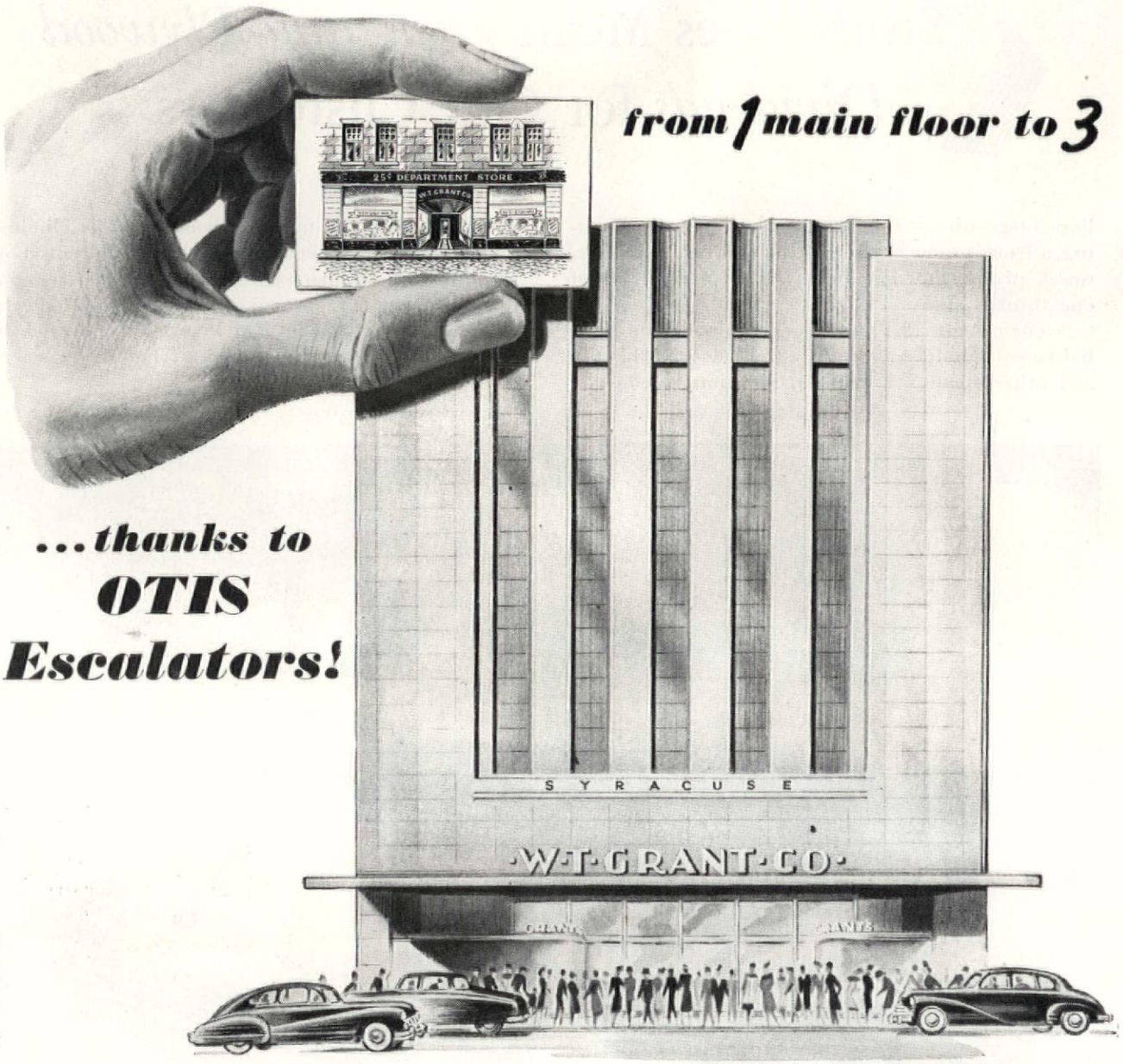


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And throughout four decades of steady growth the Grant Co. has prospered by concentrating on *main-floor selling.*

Today, four Otis Escalators are being installed to the second and third floors of their new store in Syracuse, N. Y. Why?

- because Grant's know that Escalators will give their great new store not one main floor but *three.*
- because Grant's know that Escalators will make it easy for main-floor shoppers to visit upper floors, see more merchandise.

If you need more main floors in *your* store, call your local Otis office today.

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OFFICES IN ALL PRINCIPAL CITIES



How to keep a home owner from getting "out on a raft"

• Bituminous Coal is the most economical and most dependable of all home-heating fuels, as architects and builders know.

And as stoker developments and improved local services make coal an "automatic" fuel in addition, the advantages of coal heat become even more obvious.

So even if a client *insists* on some other fuel for his new home, make sure his house plans won't put him "out on a raft" later on. Give him the opportunity to change his mind—and turn to coal in the future.

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As you undoubtedly know, the modern research facilities of the Bituminous Coal industry are hard at work not only to make coal a still better fuel, but also to devise new, low-cost *automatic* equipment that will make coal-heating even cleaner, more comfortable, more convenient and more economical. This makes it all the more important that every new home built today be planned to permit the eventual burning of coal – no matter what fuel may initially be selected.

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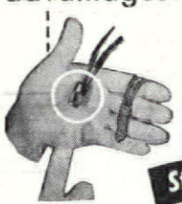
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SAFE Molded insulation prevents sharp wire ends protruding—stops insulation failures.

COMPACT "Wire-Nuts" require very little space; fit in close quarters "like peas in a pod."

EASY TO USE Strip wires—screw on—*that's all.* No solder—no tape.

FACTORY TESTED "Wire-Nuts" must pass the most rigid tests for precision and strength before shipment.

APPROVED Ideal "Wire-Nuts" are listed by Underwriters' Laboratories, Inc.

Millions of Ideal "Wire-Nuts" are in use for roughing-in, fixture wiring, etc. Write now for complete application and cost data. Free samples on request.

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Talbot Hamlin: "I urge upon planners the retention of existing structures for esthetic and even sentimental reasons." *Chairman,* holding up drawing of Princeton Shopping Center: "It has out-colonialized the old colonial town." *Walter Gropius:* "I plead that we cease complaining about the engineer against the architect, the traditionalist against the modernist; we can do the big job together or not at all." *Morris Ketchum:* "I want to make a brief plea for the pedestrian. He has lost the right to do anything but dodge . . . I believe that pedestrian walkways and concourses are just as important to the life of a city as any superhighway and parking lot." *Liang Ssu-Ch'eng:* "I am filled with envy for the problems you have ahead of you; when I see what is happening in China, I feel very sad . . . We are given the best opportunity to replan some of our cities, but unfortunately the government neither had the foresight nor a sufficient number of technicians or experts who could either individually or collaboratively tackle this subject." *Serge Chermayeff:* "I make a suggestion that a letter be processed to the Secretary General of UNESCO as follows: 'We urge . . . a plan for a fundamental reform of training for architects and planners in all countries . . . (with) basic curricular standards . . .'" *Frederick Adams:* "The proposal to set up a committee on UNESCO to work out a curriculum is the best way to divide our forces: I don't think an international committee is the group to dictate architectural or planning curricula; I don't believe a national governmental organization in this country should dictate a curriculum."

At the Thursday afternoon session, Chairman Robert O'Connor introduced George Howe, "who will in a period of ten minutes more or less discuss **Space."** *George Howe:* "Instead of timeless space, space-time is our idea." *Walter Gropius:* "In a democratic community the architect achieves an effect by means other than intimidation." *Alvar Aalto:* Humanizing Mass Production: "I think you mean the flexibility of the houses in my country . . . I think I tell it better if I just tell the short story without philosophy of how it first came out . . . We had two years of not doing much reconstruction, so much the guns were going . . . So we used humanpower for mass production, as we had not steam or electricity . . . One regiment put up 240 houses, in the forest, so that the trees growing in that place were enough for the houses. The raw material was growing in the factory itself. This way we made standardized houses, . . . then moved them down by truck or railroad, sometimes 1,000 miles . . . Now the architect's job is to be the harmonizer . . . Some of the Georgian and Gothic I see here is not that at all. When I put my finger on it and touch it, I find it is not Gothic . . . It is some kind of advertising architecture . . . Modern streamlining is a daughter of advertising . . . It grows out of the crazy competition of America . . . The best tool we have against superficial streamlining is to really work hard with standardization so that it get more human values . . . I would also have it added to the architectural education process that young boys work with their hands." *M. Roberto:* "Architects have too many ideas today. If we have accomplished something in Brazil, it is because we are rather ignorant."

After another intermission, the second afternoon session took up **The Design of Individual Objects and Their Place in the Environment.** *Walter Baermann:* "The economic cycle through which products reach the consumer today to a very high degree has destroyed in the consumer a real sense of qualitative selectiveness and has spread a superficial dollar-value consciousness." *Gyorgy Kepes:* "Vision is an example of the creative act of integration."

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Plan for beauty and utility

– a showroom carpet with spare parts



Bigelow Sonata

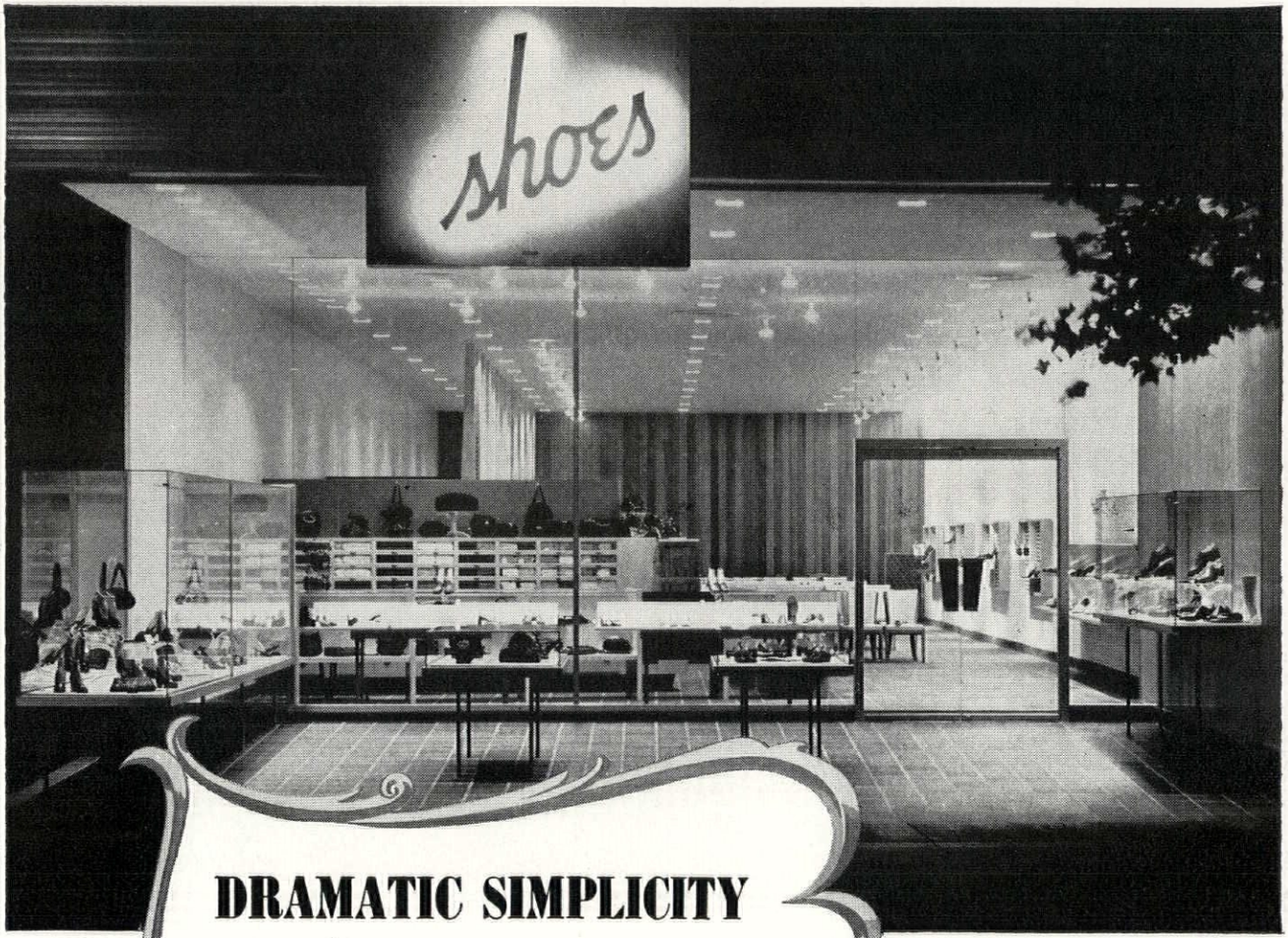
There's no doubt about it. Beauty will always remain in this showroom . . . with lush Sonata . . . a Bigelow carpet of Lokweave construction that was made to stay luxurious longer . . . to always be prepared for a quick comeback in spite of spills, burns or tears. Here's how:

This special Bigelow Sonata was made in smooth-fitting squares that are easily replaced . . . spare parts that mean real simplicity maintenance . . . without requiring complete replacement. It's a rich, thick carpet that always is and looks like *luxury* . . . always means economy. Ask Bigelow's Carpet Counsel to help you plan for beauty combined with utility, with rugs and carpets like this.

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This storefront attracts attention and centers interest on store merchandise. It says "shoes" —"*quality shoes*"—with emphasis but without bizarre effect.

Note how the wall-to-wall plate glass and *Tuf-flex** doors give a full view of the store interior, mark it as a fashion leader for accessories. Plate glass cases display additional items without impairing visibility of the store interior. The Visual Front floods the store with daylight—at night makes it a mammoth showcase.

The Visual Front is not a fixed type of front—it is as elastic as the merchandising requirements of the store—as flexible in design as the location demands. Our storefront booklets contain many ideas which you may find helpful in storefront design. Write for them. Libbey·Owens·Ford Glass Company, 6447 Nicholas Bldg., Toledo 3, Ohio.

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April 3, 1946

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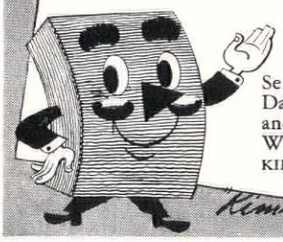
I am happy to say that my decision was a good one. KIMSUL Insulation, when properly applied, does everything you claim for it. Owners are proud of their KIMSUL installations and at times the voluntary statements they make as to benefits derived are a little embarrassing. They seem too good to be true.

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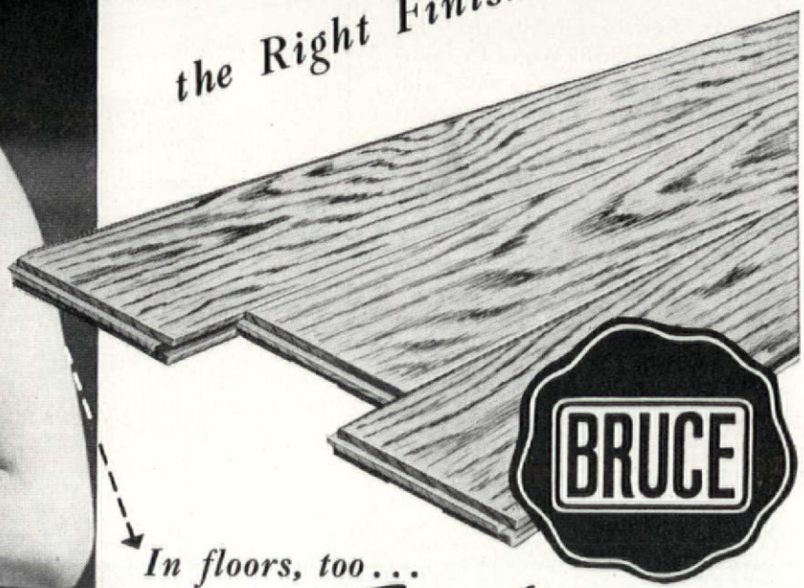
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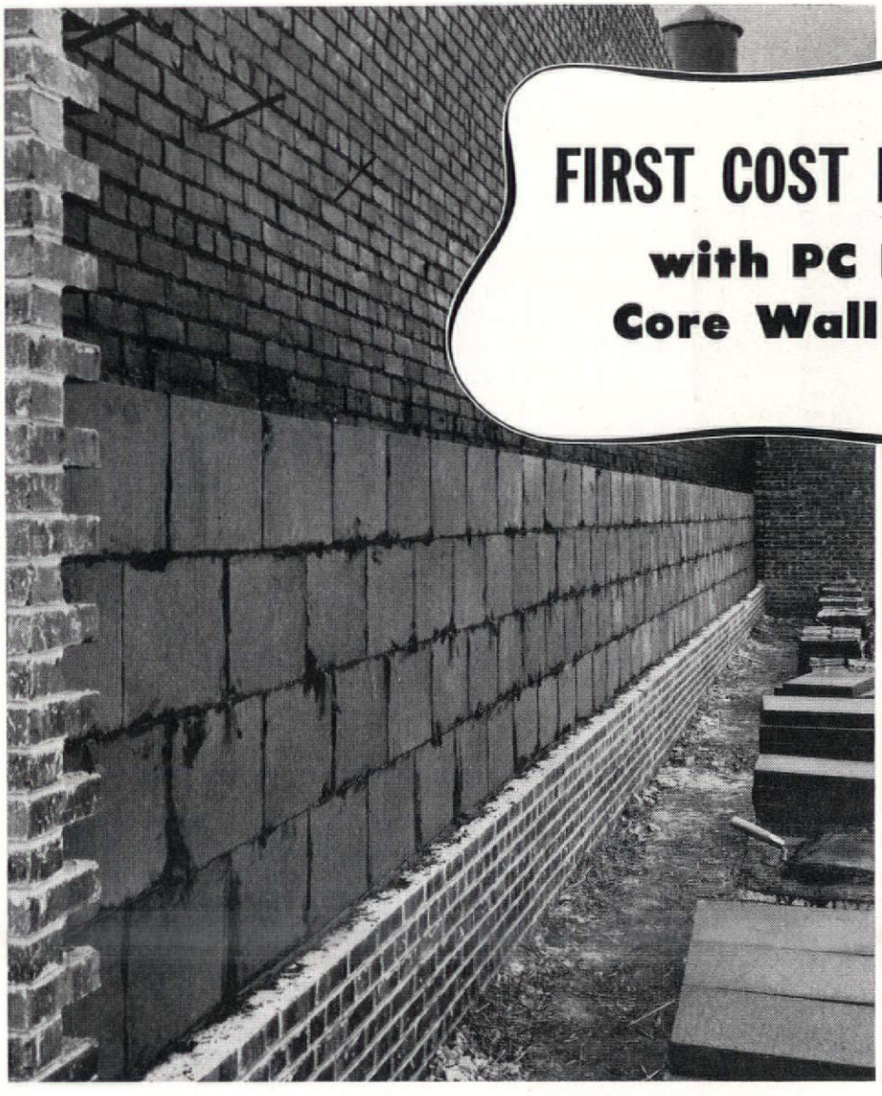
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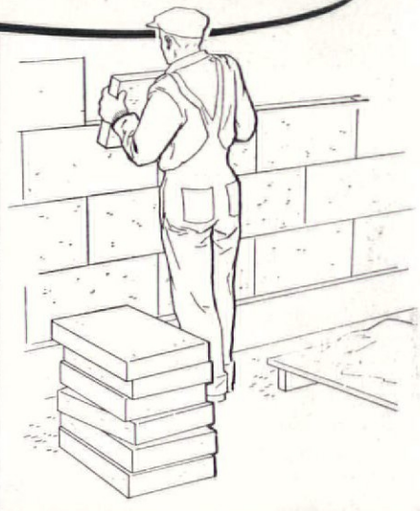
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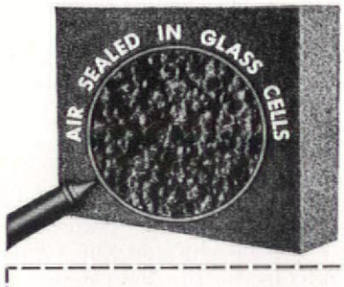
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WHEN THE CATHEDRALS WERE WHITE: A Journey to the Country of Timid People by LeCorbusier. Reynal & Hitchcock, New York. 217 pp. $2.50.

In his first book-length U. S. publication, LeCorbusier records his impressions of New York City, "work yard of the world," with an excitement and friendly insight that should endear him to every American admirer of the Vertical Style. It would be hard to imagine a more winning introduction to the point of view of a man who ranks as one of the two dominant influences in the architectural thinking of our time. An informal and witty application of the great architect's famous theories to the American scene, it is a book that nobody concerned with U. S. building will want to miss. To the great protagonist of skyscraper construction, Manhattan's eruption of steel and concrete is much more than the "proud plumes of American business achievement." It is the promise of the future: through rational use of the skyscraper technique, Corbusier thinks, man can eventually master his urban environment.

New York's skyscrapers are, of course, too small and too close together. And Corbusier is horrified to discover that the average building height is only 4½ stories. But the way he feels when he looks at the glittering night panorama of Manhattan, when he rounds one of the Wall Street corners and confronts the "tumultuous forces of architecture" pouring into a narrow street is enough to satisfy the most inveterate local booster.

His enthusiasm for U. S. elevators is also boundless, and might even be of use to the advertising copy writers. "My American auditors roared with laughter when I told them that the obstacle always raised by European opponents against my suggestions for a 'radiant city' was this: 'Suppose the elevator doesn't work!' In America the elevators do work, just as the water in the pipes, the lighting of the streets work . . . It may be said that in New York the construction of elevators has reached a moving technical and plastic perfection. A conquest of modern times, a product of selection of worthy architecture; a feast for the eyes and the spirit."

His childlike delight on discovery of a sign in one of the lovely U. S. skyscrapers reading, "Do not open the window because it will interfere with the air conditioning," is touching. He has never forgiven the Russians for installing radiators back of the solar walls of his one big building, the Centrosoyus Palace in Moscow, or the Parisians for cutting windows in the huge glass wall of his Salvation Army shelter.

But the country of skyscrapers and elevators and air conditioning is, nevertheless, a "country of timid people." Corbusier thinks Americans are timid because they are badgered by an everlasting expediency: everyone is anxious not to offend—not to offend the man higher-up, the public, the voter, an endless retinue of offstage authorities who seem to have almost entirely replaced any sense of individual authority. Consequently, Americans have little capacity for courageous and positive action. But Corbusier seems confident that the society which has thrown up the skyscrapers will also eventually find the capacity to rationalize them.

Like U. S. jazz ("the melody of the soul joined with the rhythm of the machine"), the skyscrapers are an "event and not a deliberately conceived creation." Both represent the forces of today, but the jazz is more advanced than the architecture. "If architecture were at the point reached by jazz, it would be an incredible spectacle. Manhattan is hot jazz in stone and steel."

But let no one be misled by this piece of modern Ruskinesque or by the allusion to the great era of Gothic building made by Corbusier's title. He thinks modern times are something like the collapse of the Classic tradition and the chaos that preceded the tremendous upsurge of the new Gothic forms, but he does not press the parallel too hard. And if he knows what new social cohesive will approximate the unifying force of the Christian hierarchy of values which resulted in the International Style of the cathedrals, he does not tell us. He does, however, have all the positive confidence of a thoroughly creative personality that modern society can resolve its conflicts, that the sheer logic of a planned urban environment will eventually dominate the present chaos, that architecture will not forever remain "immobilized by the pull of two opposed forces: individual liberty and collective force."

The down-to-earth example of what Corbusier means by the conflict of the individual and the group is, of course, the unplanned urban sprawl. Chasing the romantic, individualistic mirage of the "garden city," he says, city dwellers have allowed the suburban spread to reach a point where four working hours every day (not counting commutation time) must be allotted to pay for the taxes, the transportation and the services that hold together this social wasteland. Corbusier thinks the urban pattern will, in the end, solve the X in the individual-collectivity equation by housing 400 people in one acre and turning over the several adjoining acres thereby salvaged to park space.

It is almost impossible to avoid comparing the European virtuoso of the vertical with America's great master of horizontal building, Frank Lloyd Wright, who thinks that "all civilizations have died of their cities." While Wright lovingly works with the American land and has shaped his best buildings to it, LeCorbusier would use all the resources of modern technique to create an interior "conditioned" environment which would effectively isolate man from the unpredictable out-of-doors. (The green park space would, of course, appear as a glittering back-drop through the glass wall of the 65th-floor office and the city dweller could reach grass roots in a minute-and-a-half by elevator.) The European pits man against his natural environment and triumphs by technique; the American adapts the one to the other in an harmonious and graded relation of indoors and outdoors. But both men share the unshatterable vitality of creative force and both are deeply convinced that society's central question of how to live is not without an answer. Their tragedy is also identical. They know how to plan and build a new physical environment for modern society on a gigantic scale; society has given neither the chance to do it. L.C. *(Continued on page 148)*



Now... Steel for Solid Partitions *Goes Up Fast*

...with this new Milcor system

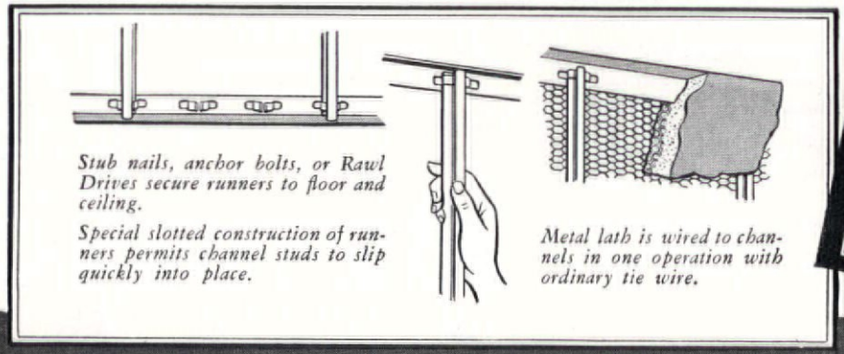
Milcor announces a new development which greatly simplifies the construction of 2-inch solid-plaster partitions.

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Consult the Milcor Manual in Sweet's Architectural File, for helpful information on the new Milcor Solid Partition System, and the complete Milcor line of steel building products. Write for bulletin on Milcor Solid Partitions.



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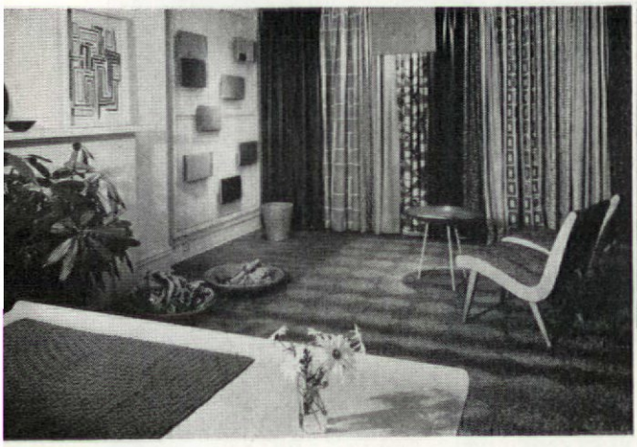
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"Propellors"—Strengell (above)

Showroom interior by Florence Knoll (left)





"Rectangles"—Shirle Rapson (above)

Group of Knoll domestic a imported fabrics (left)

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NEW FABRICS

Complementing their popular line of contemporary furnitu Knoll Associates Inc. have recently introduced a handso collection of drapery and upholstery fabrics known as t Knoll International Group. While the textiles imported fr Sweden, Switzerland and the Philippines are rich and str ing, they by no means outshine the domestic handlooms—m notable of which are some choice designs by Marian Strengell of Cranbrook. Weights range from a sturdy "Ca lina" cloth to a gossamer glass curtain material made fr pineapple fibre. Textures, self-stripes and prints are featur and, although the patterns have plenty of character, overs repeats, so popular in recent years, are notably absent. B muted and sharp color contrasts are used. Included in t collection are several rush and fibre mattings suitable f floor coverings, screens, lampshades, etc. Compared to p vailing textile prices, those of the Knoll line are gratifying reasonable, ranging from truly budget-priced cottons to m estly appraised handwovens.

Separate from the main store, the fabric showroom located at 31½ East 65th St., New York City and headed the English designer, Arundell Clark.

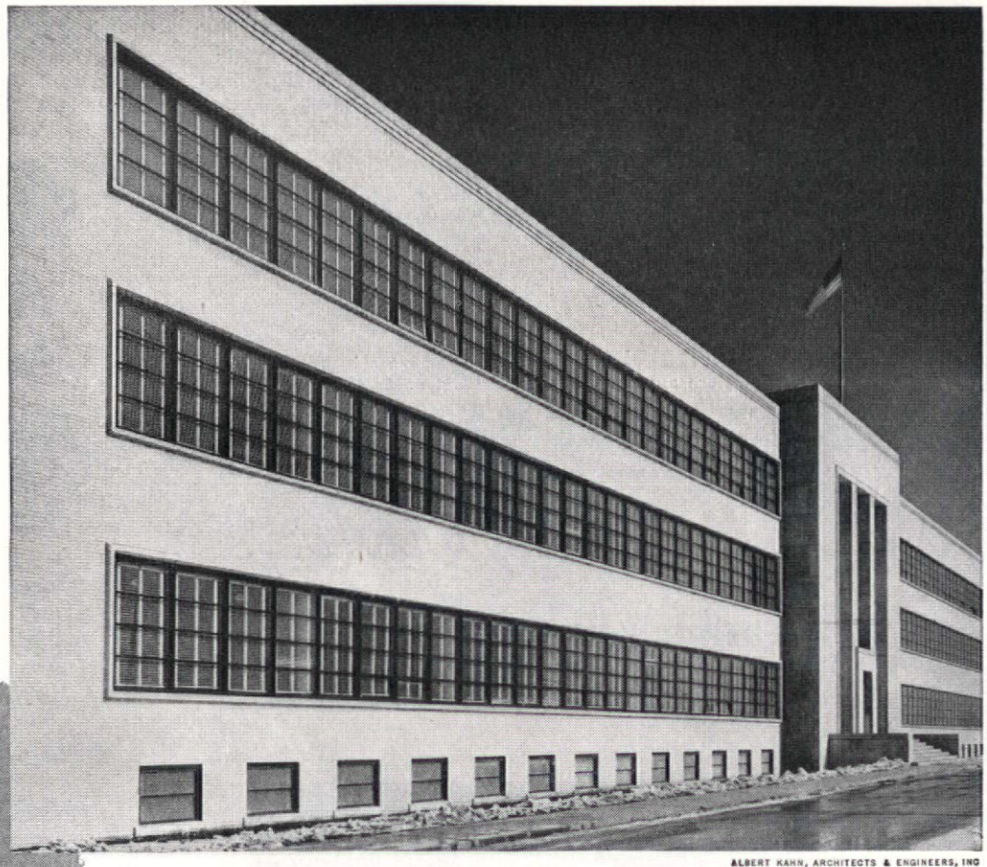
SCULPTURE UNBEARDED

In line with its declared objective, a recent exhibition, "T Decorator Uses Sculpture," sponsored by the Architectu League of New York staged a fairly convincing demonst tion of how not to be afraid of the plastic arts indoo Advance publicity, however, failed to veil the fact that ev interior designers tremble at opening the home to anythi

Furniture by designer Edward J. Wormley, sculpture by Mary Collery



(Continued on page 150)



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as earthly as clay or stone. With classic understatement it announced: "The settings range from music rooms to reception halls." Nine leading decorators and twelve sculptors joined forces to put on the exhibition which was planned by interior designer Virginia Hamill with the assistance of sculptors Margaret French Cresson and Lu Duble and architect Jedd Reisner. Generally speaking, the arrangements were stiff and a little self-conscious. Simple livability was best achieved by Robsjohn Gibbings' furniture grouping planned around a handsome marble coffee table and sleek bronze fish by sculptor Clark Voorhees.

THE ARCHITECTURAL REVIEW. Vol. CI, No. 601. January 1947. (Fiftieth anniversary issue). London. 3s/6d.

In turning its vigorous fiftieth birthday, this stimulating English magazine for the first time admits its editorial policy: "It does not set out to lead a political or moral or even a social revolution . . . It is founded on the belief that when politics, technics and sociology have been given their due architecture remains an art . . . The function of *The Review* to record contemporary buildings . . . scholar's table-talk . . . higher criticism in fields which are generally regarded as being purely utilitarian . . . preoccupation with what to the hostile critic must seem frivolous subjects: with Victorian merry-go-rounds and rustic railway stations, lighthouses, gin palaces and non-conformist chapels, exotic villadom, cemeteries, and monkey-puzzles . . . visual re-education . . ." Accompanying their summary of policy, the editors have prepared a comprehensive survey of architecture as they have published it from the turn of the century. A nicely-balanced parallel text and pictures takes us from the days of the mechanical revolution and expressionism of the prewar era (illustrated with cuts from earlier *Reviews* of the Grosse Schauspielhaus in Berlin, Morris' wallpaper, etc.) on through the development of the modern idiom; a study of materials of science as basis for a new architectural esthetic; the antiquity of the functional tradition, impact of the technical revolution on human environment; shock tactics for stimulating visual awareness; piercing the antiquarian smokescreen; significance of popular art, urban and rural; appeal of non-visual criteria; repercussions of the revolution on the arts; concluding, "with an eye trained to discriminate without prejudice, architecture can take advantage of the historic truth that the more things change the more they are the same thing."

For some years *The Review* has supplemented its presentation of modern architecture with charmingly archaeological research into quainter aspects of British background. Two of the articles in this issue are based on such policy: Marcus Whiffen's retrospective piece called "Academical Elysium: The Landscaping of the Cambridge Backs;" and, appropriately enough, a scholarly study of the work of William Morris, who died just fifty years ago when *The Review* was born. As interesting contrast and counterpoint to the former type of material—and for variation printed on paper stock of different color and quality—there is a photographic portfolio of modern airports, and a particularly interesting lead article by Henry-Russell Hitchcock on the esthetics of modern architecture: "The Architecture of Bureaucracy and the Architecture of Genius".

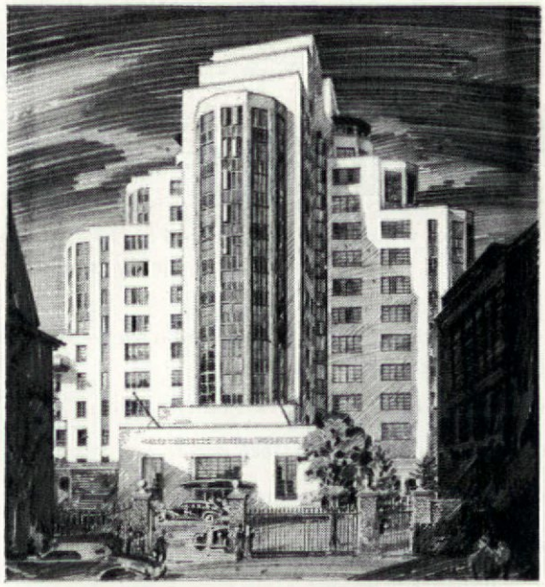
Hitchcock points out: "It is worth while to compare such a house as Wright's Millard house in Pasadena, much criticized in the twenties, with the houses . . . by Le Corbusier which were thought to have established a more advanced canon . . . Indeed, it was Wright . . . whose system of construction was the more novel . . . Wright's somewhat nineteenth century romanticism about 'Nature' is, paradoxically, perhaps less dated today than Le Corbusier's early twentieth century romanticism about the 'Machine' . . . When the superficial appearance of modern architecture was more widely accepted as familiar . . . in the thirties, two sorts of derivative work appeared in increasing quantities. On the one hand there was all the worthy work of the younger men who were following the bold leadership of the first masters of the twenties, and . . . there was the 'pseudo-modern,' some of it unpretentious if conspicuous commercial work whose designers sought cheap popularity through the strident use of clichés . . . Instead of being content to develop the fruits of a particular architectural revolution which had already taken place, some aimed at a sort of permanent revolution, just at the time when the passage of years began to make evident that the revolution

(Continued on page 154)

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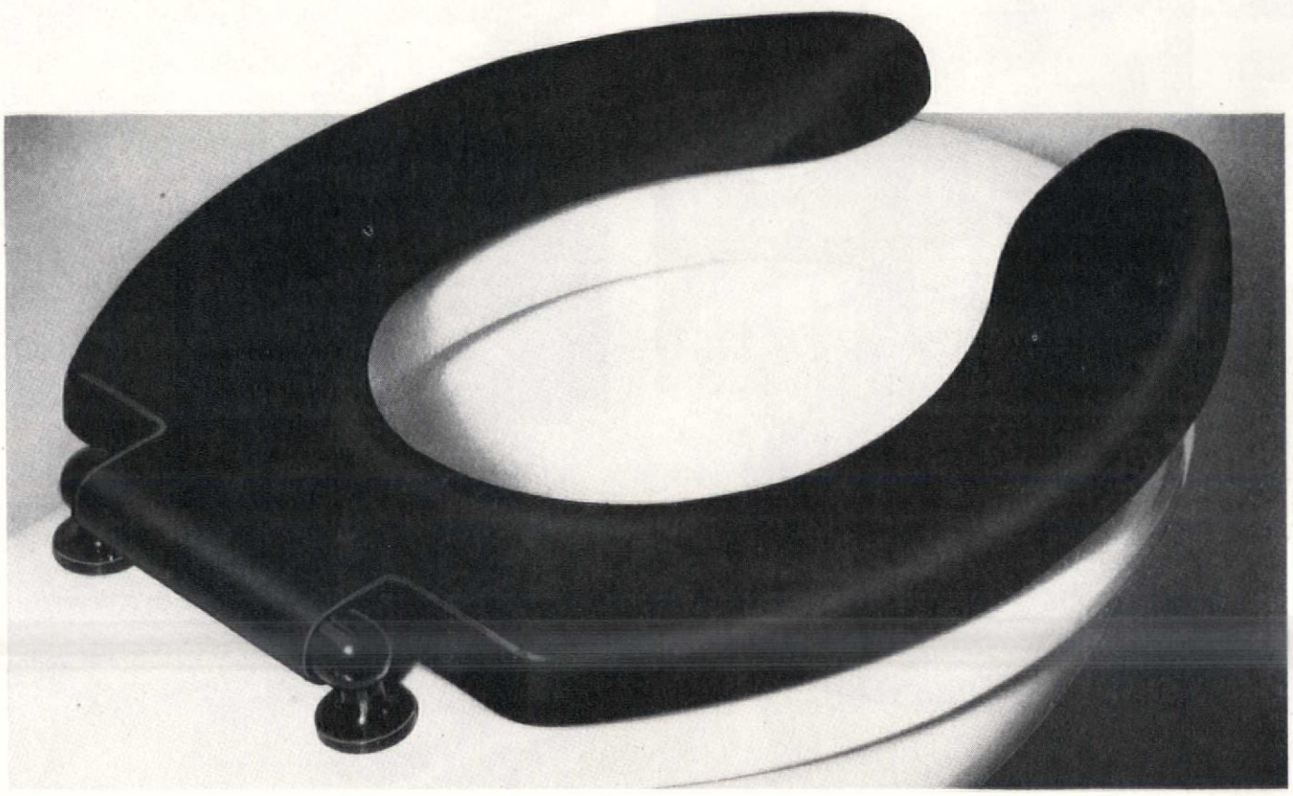
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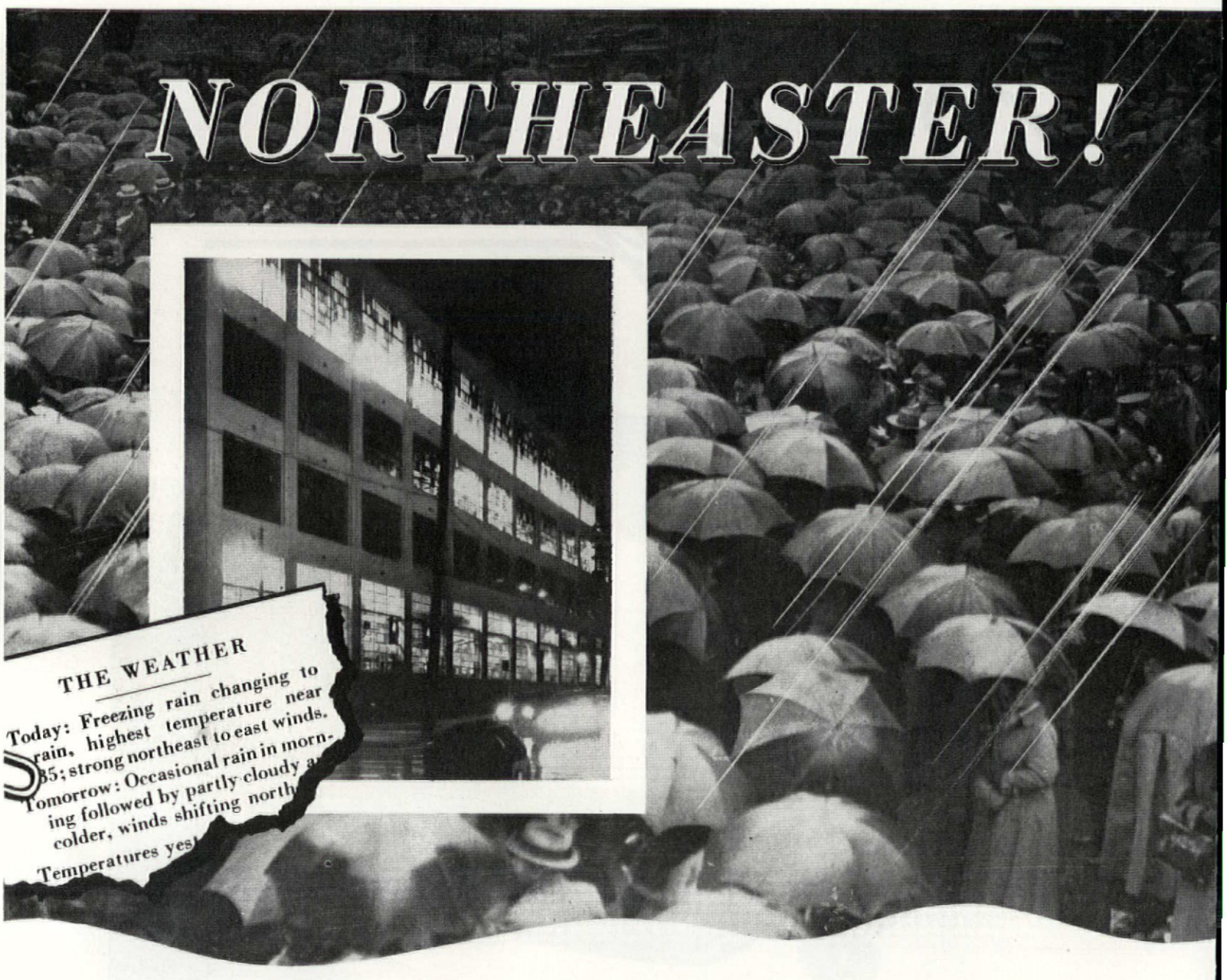
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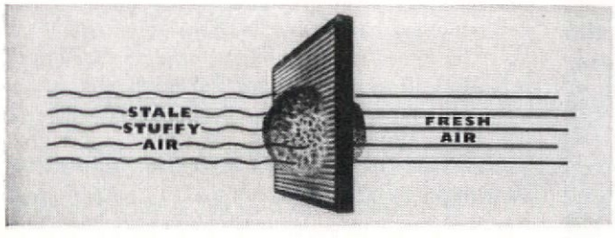
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of the twenties rather required patient consolidation of its initial gains . . .

" . . . The particular situation which justified a primary critical approach to new buildings in terms of their degree of modernity came to an end with the present decade . . . The major division of architecture . . . is . . . going to be between what may be called the architecture of bureaucracy and the architecture of genius, and of the latter we may presume that very little will be built for some years to come . . . By bureaucratic architecture I mean all building that is the product of large-scale architectural organization, from which all personal expression is absent . . . the production of such an architectural firm as Albert Kahn, Inc. . . . City development is another field in which efficient production ought theoretically to be undertaken by a bureaucratic architectural organization. It is because we have no really large-scale organiz tions in America in this field (except T.V.A.) that the resul are generally inferior to our factories in those qualities whi only large-scale organizations can provide . . .

". . . Wright's Modern Gallery for the Solomon R. Gugge heim Foundation (FORUM, Jan. '46) . . . belongs to a entirely different world—the architecture of genius . . . t sort of architect who functions as a creative individual rath than as an anonymous member of a team . . . The Gallery ma or may not be going to be successful as a whole, but if it not, it will be because of some inherent flaw in the essenti concept, not because it could be improved by changing th or that part. In other words, the architecture of genius is kind of artistic gamble which may or may not come off, b rarely just gets by. It would not be sensible to leave the co duct of large-scale operations, such as factories or schoo . . . in the hands of a single gambler . . ."

In the jungle of bureaucratic and individualistic archite ture, few magazines have done as thorough a job of weeding *The Review*. We wish it another fifty years of work as we done!—EB

AN ALBUM OF MAYA ARCHITECTURE. By Tatiana Pro kouriakoff. The Carnegie Institution of Washington. Washin ton, D. C. 15½ x 12¼. Illustrated. $10.

"It is . . . common characteristics of otherwise widely dive gent cultures, rather than their more striking contrasts, th encourage . . . the constant effort to discover some princip of social progress and regression which would be general applicable and which eventually might help us to understan more clearly the mounting problems confronting our ow society. In our time, to all but a few determined visionarie such an aim seems vastly remote, but it is in itself more tha enough if the study of antiquities brings with it an appreci tion of the accomplishments of other races and if the realiz tion of the potentialities of obscure peoples who, like th Mayas, are at present insignificant and just helps to keep aliv the hope that under happier conditions, all nations may sha equally in a common find of culture and may equally co tribute to its advance." This is the guiding tenet that e couraged Miss Proskouriakoff to complete her elaborate an scholarly series of reconstructions for the Carnegie Institutio built up from the Mayan ruins of southern Mexico. Her boo is a labor of love, evident in text and drawing. The autho exact and competent, has, however, more than historical an archaeological interest in her work. Harshly appraised, th book is undoubtedly most valuable for its documentary co tribution, but it is by no means the usual mumified recor Throughout, the volume is brightened and enlivened by th Miss Proskouriakoff's enthusiasm and vision which tran cends the years without loss of professional authority. H thoughtful conclusion: "It is somewhat disturbing to ou complacent faith in constant progress to realize that th higher elements of a culture can be so evanescent and tha they can so completely disappear . . . Undoubtedly the weal ness of Maya civilization lay in its spirituality and in th fact that its higher intellectual activities . . . were bound u with the destiny of a numerically insignificant group of the crats, artists, and scholars, whose extinction at a strok reduced life to a very primitive level. The cities served not a foci of industry but as centers to provide the ruling caste wit opportunities for theological and scientific discourse, for th elaboration of architectural and sculptural art, and for th development of gorgeous religious ritual. They were n

(Continued on page 15

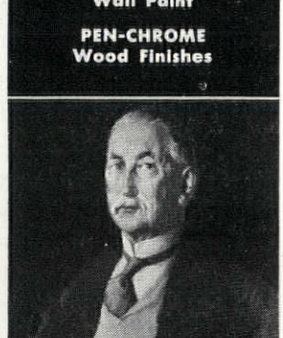
O'BRIEN Varnish Company
BECOMES
The O'BRIEN Corporation

Because the name "O'Brien Varnish Company" has caused some confusion, this organization will be known hereafter as "The O'Brien Corporation", a name more suggestive of the modern, complete line of O'Brien finishes so often specified by architects and builders.

No change in ownership, personnel or policy of the corporation has been made. In adopting the new name, this organization continues to uphold the ideal of Patrick O'Brien, to manufacture only the finest finishes. THE O'BRIEN CORPORATION, SOUTH BEND 21, INDIANA.

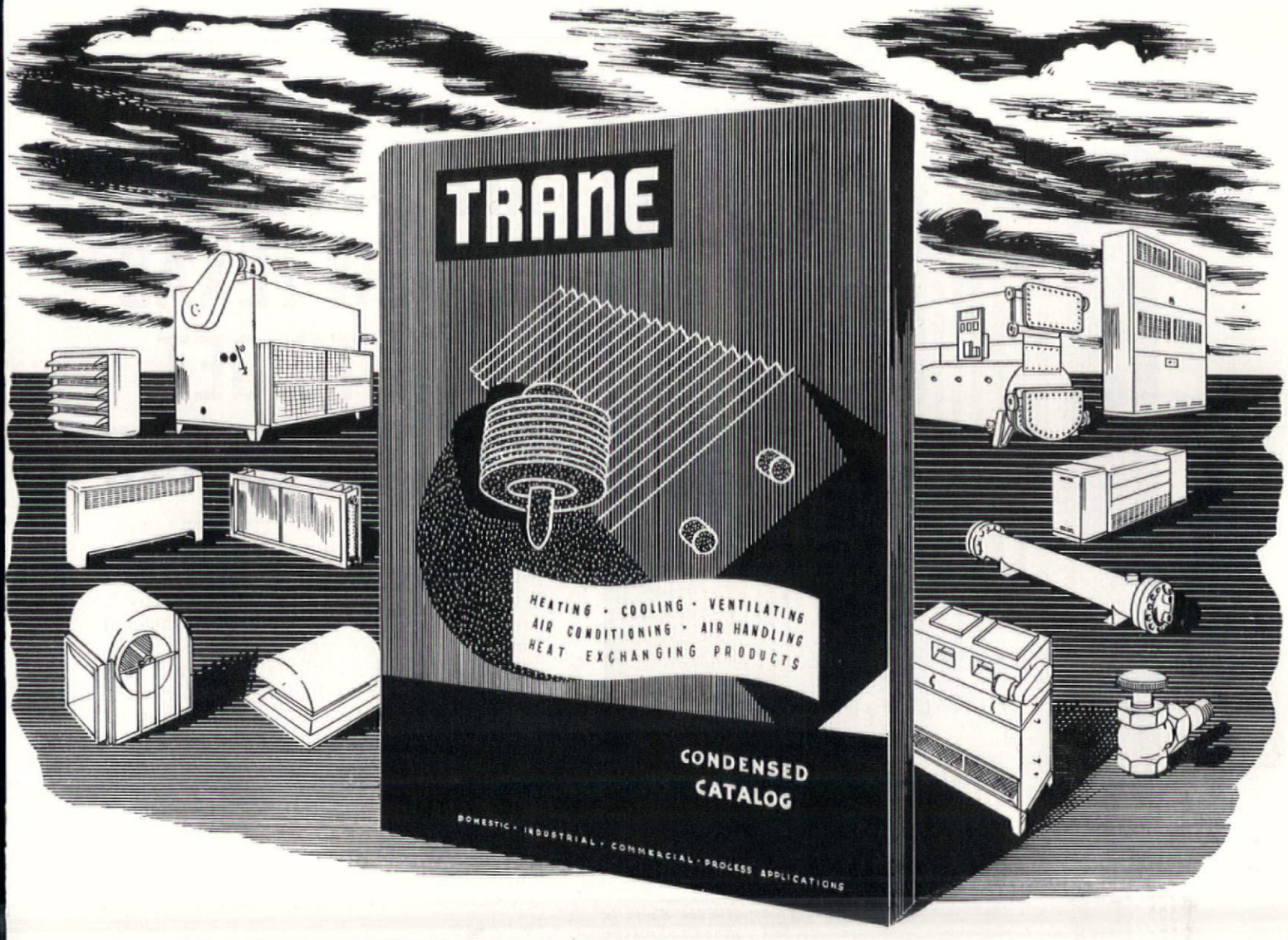
FIRST TEAM
of the complete line of fine O'BRIEN Finishes

LIQUID-LITE White Enamel
LIQUID VELVET Washable Flat Wall Finish
PREPARED HOUSE PAINT
O'LITE Resin Emulsion Wall Paint
FLEXICO DeLuxe All-Purpose Enamel
ONE-COAT FLAT Wall Paint
INTERIOR GLOSS Wall Enamel
FLOOR AND DECK ENAMEL
QUICK DRYING ENAMEL
SATIN FINISH Wall Paint
PEN-CHROME Wood Finishes



FOUNDER—Patrick O'Brien, president until his death in 1913. His ideal of manufacturing only *high grade* finishes still guides the organization he founded.

O'BRIEN
FINE Since 1875 FINISHES



BEHIND TRANE HEATING AND AIR CONDITIONING--

THE MOST COMPLETE LINE OF PRODUCTS IN THE INDUSTRY

Whatever the problem—whether heating an apartment—dehumidifying the air in a blast furnace—attracting mid-summer business to a restaurant—preventing ether explosions in a hospital operating room—Trane Heating and Air Conditioning Systems offer the correct solution. To make this versatility in heating and air conditioning possible, Trane furnishes the most complete line of products in the industry.

Trane products are developed, tested, and built to the highest engineering standards . . . with the added advantage that every Trane product is designed to match every other Trane unit. Thus Trane systems give the performance that is only possible when every component is operating in complete harmony with every other.

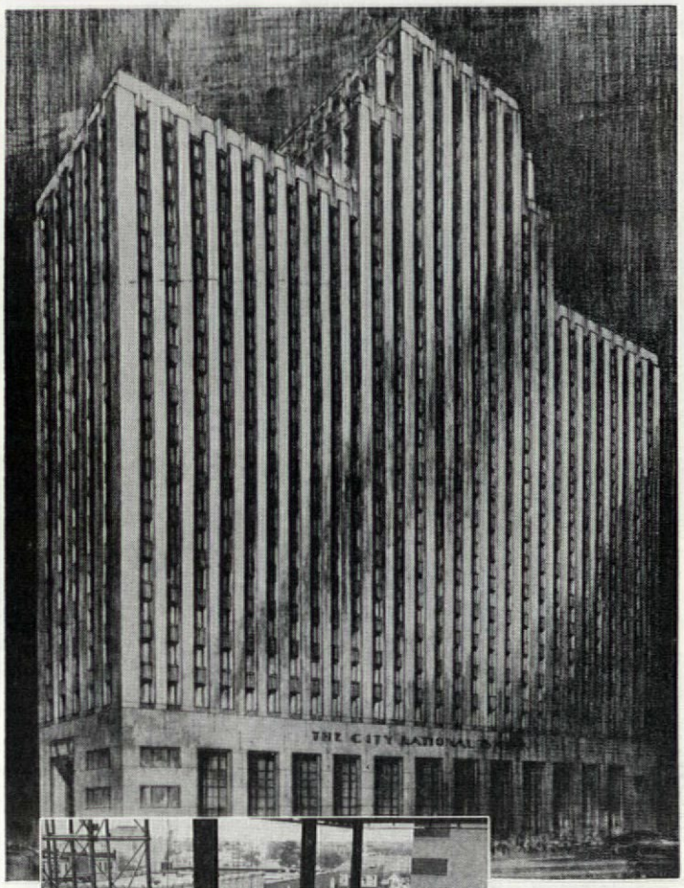
The completeness of the Trane line makes it possible for the architect, engineer, and contractor to specify from *one source* in planning Trane Heating and Air Conditioning Systems. Trane field offices in 85 principal cities co-operate with them.

TRANE

Manufacturing Engineers of Equipment for
HEATING AND AIR CONDITIONING

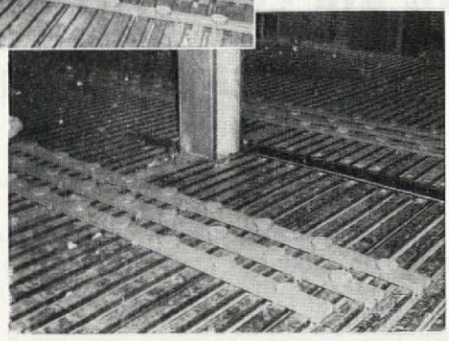
THE TRANE COMPANY, LA CROSSE, WISCONSIN • *Also* TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO







Header ducts in place showing how Q-Floor installation follows closely behind steel framework



Installation view shows arrangement of header ducts which permits tenant to locate new outlets at any time, anywhere in the floor, on 6-inch centers.

ALL 24 FLOORS OF NEW TEXAS BANK TO GET Q-FLOOR WIRING

The electrical flexibility, convenience, and permanence of General Electric Q-Floor Wiring are strikingly demonstrated by a current installation in the new City National Bank in Houston, Texas.

Upon completion, this large project will be well equipped to handle all immediate needs for electrical services. In addition, provisions for future requirements are literally built into the permanent distribution system. New outlets can be installed as required on six-inch centers anywhere in the entire 24 floor area. There is no need for tearing up floors and running new conduit. The cellular members of the Robertson Q-Floors act as permanent, easily accessible raceways.

Q-Floor Wiring For Your Projects, Too

While this kind of cellular wiring system is extremely suitable for monumental structures, it can just as easily be applied to small commercial buildings, hospitals, factories, laboratories. In fact, there is no type of building where Q-Floor Wiring cannot be successfully employed. To help you and your clients benefit by Q-Floor electrical flexibility, a nation-wide service organization is available to help you. A General Electric Q-Floor Field Specialist, or your nearest General Electric Merchandise Distributor, is prepared to offer complete layout and installation data.

Q-Floor Information Offered

A comprehensive booklet containing descriptions, wiring diagrams, installation details, and other valuable information for architects, builders, and electrical contractors may be obtained by writing to Section C51-44, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

CONSTRUCTION DATA

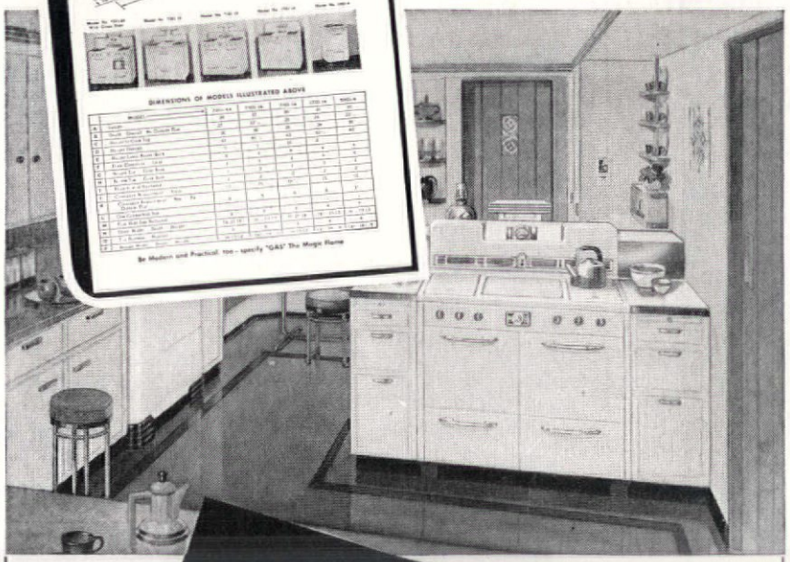
Building:	*City National Bank, Houston, Texas*
Architect:	*A. C. Finn*
Structural Engineer:	*Robert Cummins*
Mechanical Engineer:	*Reg F. Taylor*
General Contractor:	*W. S. Bellows Construction Company*
Electrical Contractor:	*Schnorbus Electric Company*

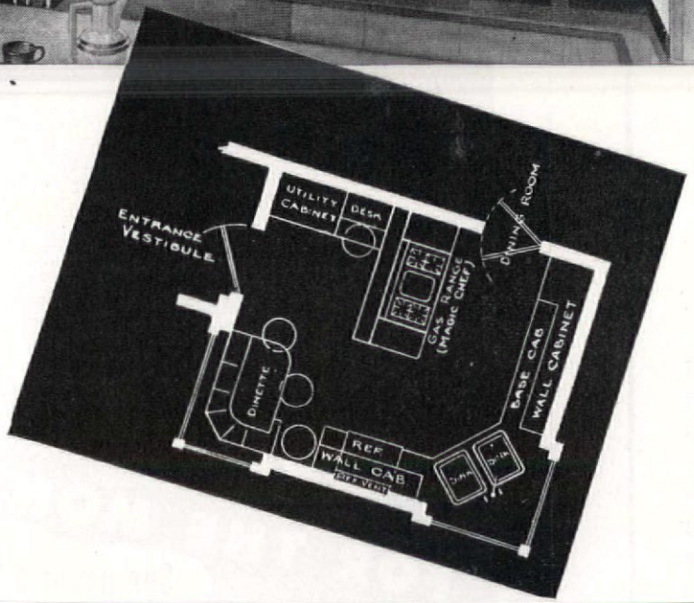
GENERAL ELECTRIC

Send for *Magic Chef*'s KITCHEN PLANNING DATA

In our recent architect and builders survey you told us what you wanted—Here it is!







OUR KITCHEN PLANNING DATA CONSISTS OF:

1 Magic Chef Specification Page. Gives detailed measurements on 5 different models of Magic Chef Gas Ranges.

2 Kitchen Supplement showing 12 different kitchen designs offering a wide variety of arrangements and utility features to choose from.

3 Floor Plan Insert—shows the detailed floor plan of each of the 12 kitchens mentioned in item No. 2 plus detailed plans for other sections of the kitchen.

4 Kitchen Broadside shows 10 New Freedom Gas Kitchens in full color which affords excellent opportunity to study the full effects of contrasting colors in the kitchen.

Your clients can cook with gas wherever they live. Perfect results with "Pyrofax" or other LP (bottled or tank) gases.



LOOK FOR THE FAMOUS RED WHEEL — THE MARK OF DEPENDABILITY

AMERICAN STOVE COMPANY
Advertising Dept., 4301 Perkins Ave., Cleve. 3, O.

Please send me items Checked

1. Domestic Kitchen Planning Kit ☐
2. Information on Heavy Duty equipment for hotel restaurants ☐

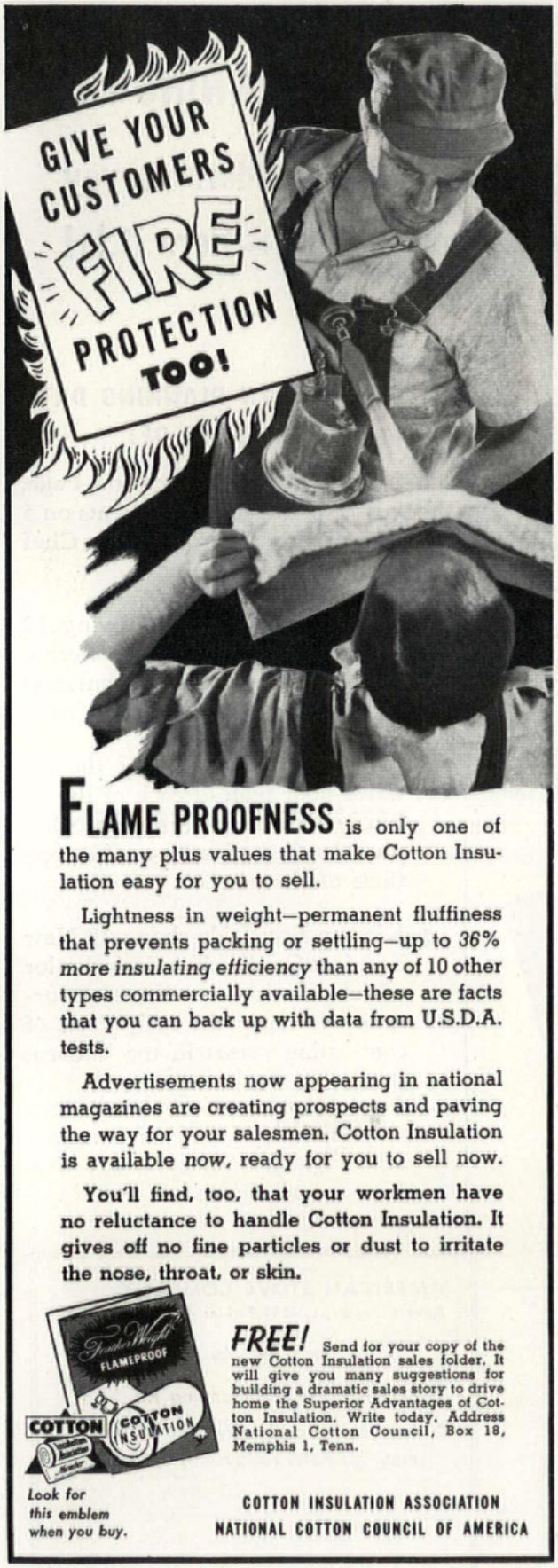
really essential to the life of the masses, and it can well be imagined that with the still unexplained passing of the class that created them, they were rapidly abandoned."—M.S.

THE PREFABRICATED HOUSE. By Raymond K. Graff, Rudolph A. Matern, Henry Lionel Williams. Doubleday & Co., Inc., Garden City, N. Y. Illustrated. 7 x 10¼ in. $2.75.

This is an elementary primer for the lay house-buyer—not for the architect or builder, who has already read it in magazines. Yet the book does not meet the buyer's real need: a shopping guide to the bewildering prefab market which gives comparative data on costs and values of one manufacturer versus another—not merely an appended list of prefab suppliers in the back of the book.

The authors do give sensible warning: "The first thing to remember is that in buying any prefabricated house you do not get a complete dwelling ready for occupation, and that the package may actually represent less than 50 per cent of the cost of the finished job. Since no manufacturer has as yet entirely solved the problem of mass production and mass distribution, he cannot realize the savings in cost that are theoretically possible. For this reason he cannot, in many localities, compete with custom-built or speculatively built houses in the matter of price . . . Comparisons between prefabs and conventional houses . . . are matters for someone with the necessary technical training, such as engineers and architects.

But if this book is not a torchlight guide to the shifting prefab morass, there is good commonsense advice on the things to check in buying a prefab: what to look for in floors, walls, heating, finish, etc. (particularly in Chapter IV, "How to Choose Your House").—E.B. *(Continued on page 162)*



FLAME PROOFNESS is only one of the many plus values that make Cotton Insulation easy for you to sell.

Lightness in weight—permanent fluffiness that prevents packing or settling—up to *36% more insulating efficiency* than any of 10 other types commercially available—these are facts that you can back up with data from U.S.D.A. tests.

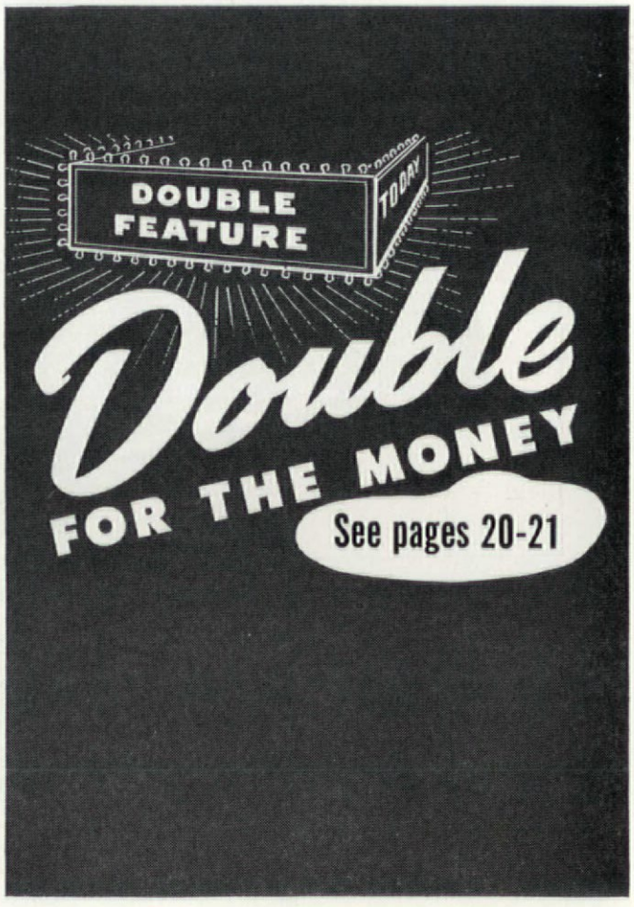
Advertisements now appearing in national magazines are creating prospects and paving the way for your salesmen. Cotton Insulation is available *now*, ready for you to sell now.

You'll find, too, that your workmen have no reluctance to handle Cotton Insulation. It gives off no fine particles or dust to irritate the nose, throat, or skin.

FREE! Send for your copy of the new Cotton Insulation sales folder. It will give you many suggestions for building a dramatic sales story to drive home the Superior Advantages of Cotton Insulation. Write today. Address National Cotton Council, Box 18, Memphis 1, Tenn.

Look for this emblem when you buy.

COTTON INSULATION ASSOCIATION
NATIONAL COTTON COUNCIL OF AMERICA



Choose Your Style
THEN CHOOSE *WELDWOOD* FOR THE INTERIOR



What are you working on? Public building or private home? Millionaire's mansion or veteran's bungalow? Cape Cod cottage or modern solar house?

Whichever it is, you'll add extra appeal to the interior when you specify Weldwood* plywood walls. Weldwood brings to interiors all the warm, soft, ever-popular beauty of genuine, richly-grained wood.

And there's a wood for every mood . . . from fine domestic woods such as oak, birch and knotty pine to rich imported de oro, mahogany and prima vera to mention only a few.

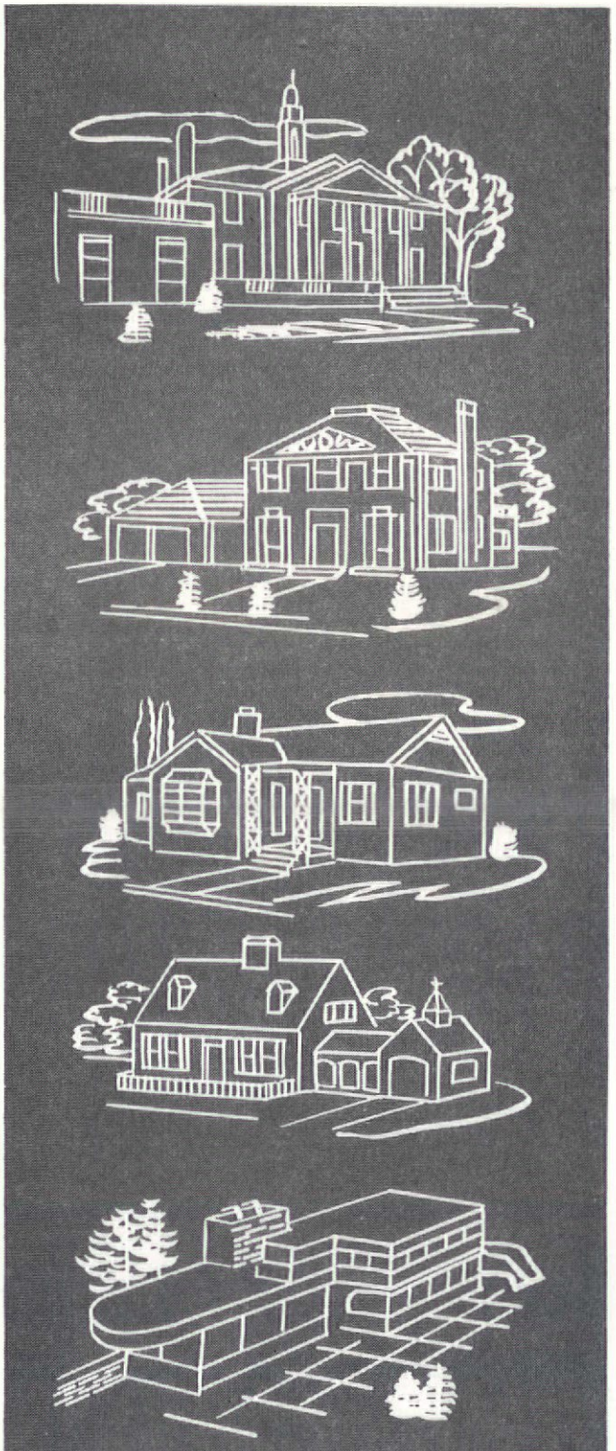
Looking for something new and different? Consider Weldtex*. Here is an economical, utilitarian Weldwood panel with which you can achieve innumerable decorative effects. The surface of the panel is attractively striated. It can be installed vertically, horizontally, or in interesting checkerboard, herringbone or other patterns . . . can be painted, stained or left natural.

Versatility is only one of Weldwood's many virtues. In addition it gives you structural strength and stability, ease of installation, economy.

And it's durable . . . guaranteed for the life of the building. The Weldwood interiors you design today will be prestige-makers for you for years to come.

Put all these advantages into your homes. Write for full information, and request our Weldwood Installation Booklet. It's yours for the asking.

*Registered Trademarks



Waterproof Weldwood for exterior use is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood for interior applications are manufactured with extended urea resins and other approved bonding agents.

Weldwood
Plastics and Wood Welded for Good

WELDWOOD Plywood

Weldwood Plywood and Mengel Flush Doors are products of

UNITED STATES PLYWOOD CORPORATION
New York 18, N. Y.

THE MENGEL COMPANY
Louisville 1, Ky.

Distributing units in Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Pittsburgh, Rochester, San Francisco, Seattle. Also U. S.-Mengel Plywoods, Inc. distributing units in Atlanta, Dallas, Jacksonville, Louisville, New Orleans, Houston, St. Louis. *In Canada:* United States Plywood of Canada, Limited, Toronto. *Send inquiries to nearest point.*



Third of a Series: The Neuday Bathroom

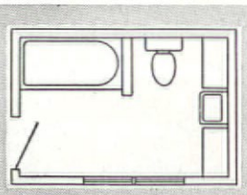
New Bathroom Groups for those homes you are building

Fresh styling and new beauty to suit today's taste—new efficiency and compactness—the same high quality that has always characterized Crane Plumbing—that's the Crane line for 1947—designed to add sales appeal and better value to the homes you build.

The Neuday Bathroom Group shown above is only one of the many Crane Groups now in actual production. The range is sufficient to meet every taste as well as every building budget, and all have the new *Dial-ese* faucets that open and close at a finger's touch, reducing wear and consequent dripping.

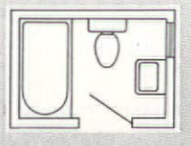
In the kitchen, too, Crane offers a wide range of equipment. The newly developed line of heating assures builders of getting boilers and furnaces for coal or coke, oil or gas, plus everything necessary for any type of home heating.

At your Crane Branch you will find illustrations of the complete Crane line of plumbing fixtures installed in actual room settings and photographed in color. They will be glad to discuss your requirements and give you approximate delivery dates on the equipment you need.

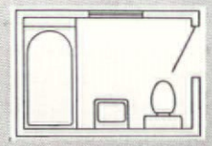


Approx. Size: 9½ x 7 ft.

Shown at the left is the floor plan for the bathroom illustrated above. Of course, the compactly styled fixtures of the Crane Neuday Group may be used in smaller bathrooms as suggested by the two diagrams at the right.



Approx. Size: 6½ x 5 ft.



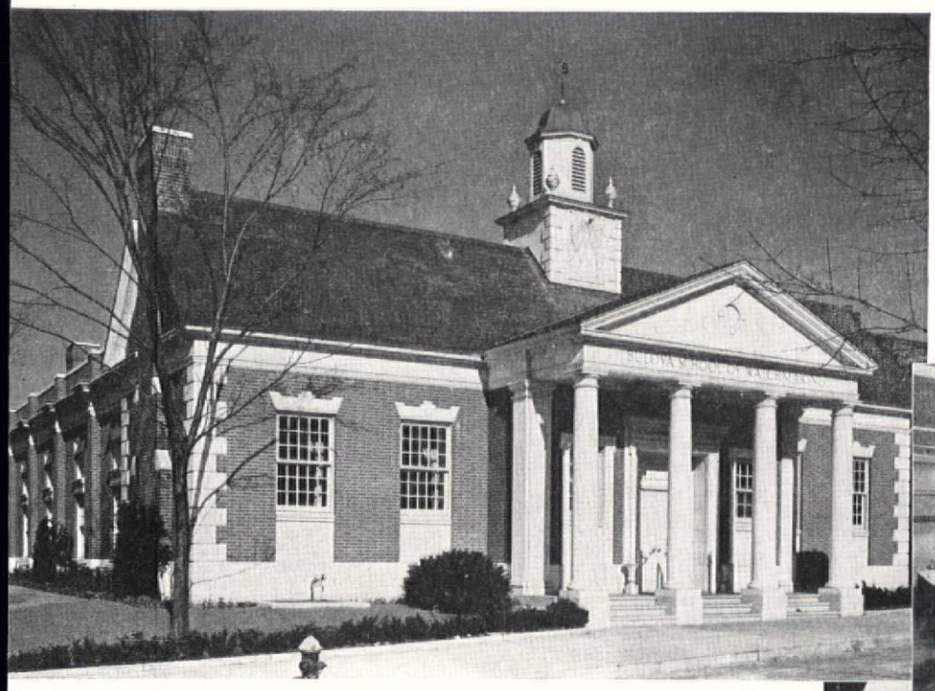
Approx. Size: 7½ x 5½ ft.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO 5

VALVES • FITTINGS • PIPE
PLUMBING AND HEATING

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS









BULOVA SCHOOL OF WATCHMAKING, WOODSIDE, L. I.
PERRY, SHAW & HEPBURN, Architects, Boston. P. KRETZER & SON, General Contractors, Flushing, N. Y. EDWARD K. PERRY CO., Painting Contractors, Boston.

THE Joseph Bulova School of Watchmaking was conceived as a living, practical memorial to the basic ideals of the founder of the Bulova Watch Company, who died before World War II began. Mr. Arde Bulova created this memorial to his father to restore usefulness and happiness to handicapped veterans, through training in watchmaking.

At a national convention of retail jewelers, jobs were immediately pledged to all veteran graduates of the School, chartered by the New York State Board of Regents, which confers diplomas after a year's course. The School, supported entirely by the Bulova Foundation, receives contributions from the Bulova family and the Corporation. Tuition is free to the students.

Located in Woodside, L. I., the building, of Colonial design, is completely air-conditioned. Wheelchair cases use convenient ramps, with doors opened automatically by an electric-eye. Motion pictures and the latest educational techniques are used in the instruction course. Facilities include complete medical and nursing service in addition to hot meals and recreational features. Basic training courses for bed-ridden students have been established at veteran hospitals throughout the country.

It is both gratifying and significant that Pratt & Lambert Paint and Varnish were used in the decoration of this unique, humanitarian project. The Pratt & Lambert Architectural Service Department offers aid to architects in securing appropriate decoration for any type of structure.

PRATT & LAMBERT-INC., Paint & Varnish Makers
NEW YORK · BUFFALO · CHICAGO · FORT ERIE, ONT.

PRATT & LAMBERT PAINT AND VARNISH

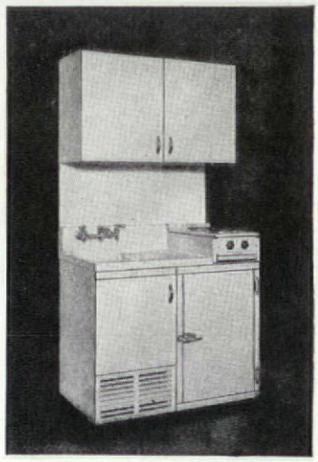
REGISTERED PL TRADE MARK

Murphy Cabranette Kitchens

The only kitchens of their kind in all the world

Welded steel throughout. Exposed surfaces of genuine vitreous porcelain.

Made in 4 widths. Add Utility Cabinets (with shelves) and Implement Cabinets for more storage space. Murphy Cabranette Kitchens never require repainting —upkeep is negligible.



No. 39

Ultra-compact. Storage, deep-bowl sink, electric cookery and refrigerator for efficiency apartment or bachelor suite. 39 inches wide and 23 inches deep, it fits in tiny space.

No. 480

Full kitchen convenience in two by four feet. Gas or electric range with oven, electric refrigerator, sink and storage cabinets.



Nos. 60 and 66

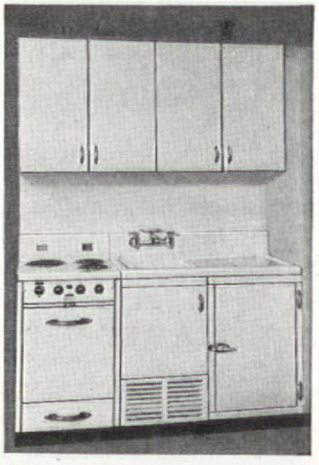
Full-sized electric or gas range with oven, full-sized sink, larger refrigerator and more storage space. 60 and 66 inches wide respectively.

Utility and Implement Cabinets



In 15-inch & 21-inch widths.

May be added to all size kitchens.



DWYER PRODUCTS CORPORATION

Dept. AF447 Michigan City, Indiana

THOUGHTS ON DESIGN. By Paul Rand. Wittenborn & Co., 38 East 57th St., New York 22, N. Y. 160 pp. Illustrated. 8 color plates. Text in English, French and Spanish. 8½ x 10½. $7.50.

During the past few years Paul Rand has established himself as one of America's most able and imaginative advertising designers. Now in book form he presents a virtual one man show complete with artist's comments. Examples of his work are divided into six groups: "the symbol in advertising, versatility of the symbol, the vote of humor, individuality and abstract forms, reader participation, yesterday and today." As self-contained groups illustrating a particular point, device or technique, the last four make sense. Illustrations are familiar but of a quality that bears rescanning many times. It only seems too bad that more full color reproductions were not included.

In the two introductory chapters Mr. Rand unfortunately indulges in a surfeit of rather obscure rationalization. There has been a distinct trend toward the esoteric in recent artistic literary works but four or five volumes of retrospective rationalization, either mathematical or philosophical, suffice the reading public. More only serves to bolster a growing conviction on the part of the public and professionals, that the great majority of artists cook up their methods and motives only after substantial sales of canvasses afford them the leisure for speculation.

After reading Mr. Rand's tiresome and unoriginal thoughts on the significance of the cross and circle and the principle of male (vertical) and female (horizontal) forces, one turns again, and with relief, to the sanity and purpose of another recent book, "Modern Art in Advertising" (FORUM, Jan. 1947) that presents good advertising design as a natural, understandable, earthly and achievable form of art. M.S.

(Continued on page 166)

WHICH COLOR?

Here's the Answer!



A "find" for the ARCHITECT!

When your clients ask "What *color* will be best?" you'll have a quick answer in the handsome Moleta COLOR GUIDE.

150 *beautiful colors* are displayed . . . Blues, Greens, Yellows, Grays, Browns . . . every tint from the palest to the darkest!

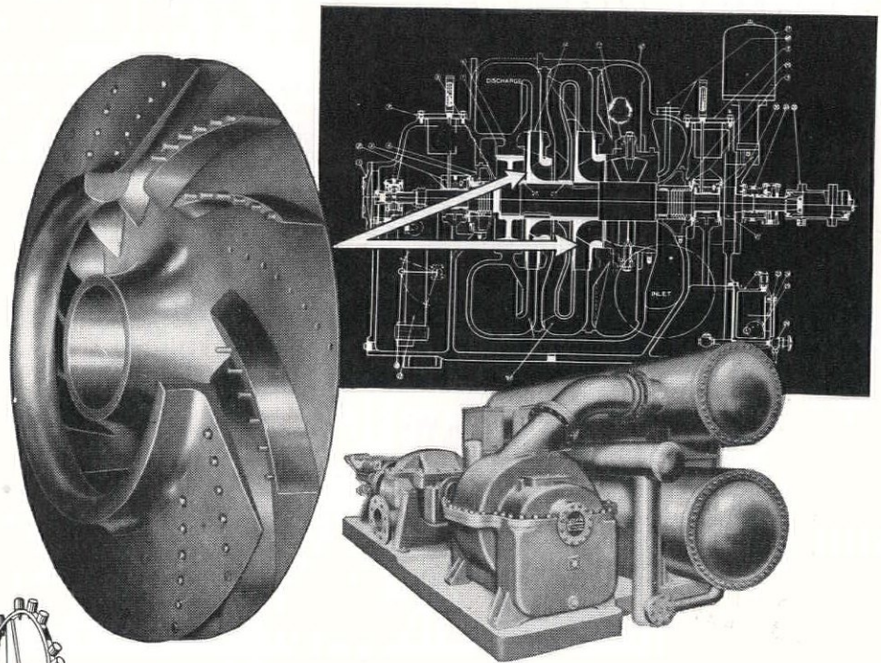
Formulas are given on the reverse of each color sheet (9" x 15") to show how the shade can be quickly made. Price, $5.00 . . . delivered anywhere in the U.S.A. Write for *your copy*.

MONROE, LEDERER & TAUSSIG, INC.
606 N. AMERICAN STREET PHILA. 23, PA.

Moleta ARCHITECTURAL **FLAT OIL PAINT**

THE TRULY WASHABLE FLAT PAINT

Weigh all the advantages





Watch-maker Precision in Stainless Steel!

Adds long life and perfect balance to the York Allis-Chalmers Turbo Compressor

Impeller wheels for the Turbo Compressor are built with the same care as the balance wheel of your watch.

York impeller blades are forged from the finest turbine quality stainless steel, the metal that best withstands the corrosive and erosive action of refrigerants. There is no coating of any kind to become separated from the base metal and cause unbalance, destructive vibration and excessive wear and tear on shaft and bearings.

York blades are forged and milled with the rivets integral, and which are flush-headed into counter-sunk holes in hub disc and cover disc, thus providing passages free of rivet heads that would impede gas flow, use up non-productive horsepower.

Finished blades are checked for balance by Troy weight, as used by jewelers, and after assembly, impellers are tested at 30 percent above top operating speed.

The care exercised in the production of this one part, however, is typical not only of the complete turbo-compressor assembly, but of the whole York line of refrigeration and air conditioning products. York Corporation, York, Penna.

York's Engineering Assistance backs up York's Outstanding Equipment

Experience and practical technical assistance unequalled elsewhere are available to you as a York customer . . . *wherever you may be.*

In the Philadelphia Area, for example, District Manager Lebair, assisted by sixteen York-trained sales engineers, are at the service of York customers in this region. The highly practical, up-to-the-minute assistance and advice of these gentlemen are available to you at all times, whether you are planning, purchasing, installing or operating refrigeration or air conditioning systems or equipment.



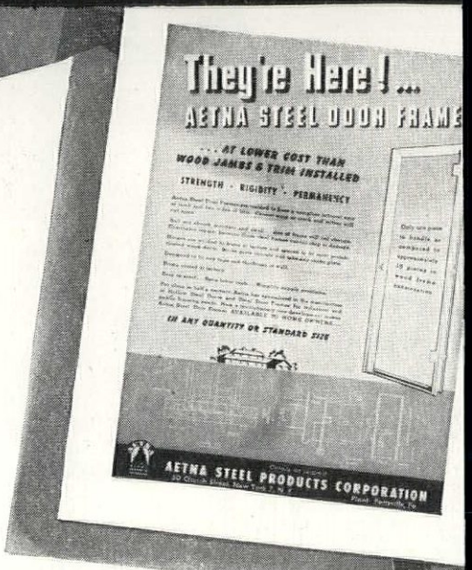
M. S. LEBAIR,
District Manager

Assisted by:
R. G. Werden, Sales Manager
Michael P. Beere
J. W. Chandler
F. W. Cherry
J. P. Clymer, Jr.
J. Ralph Custer
C. W. Hemphill
W. R. Hollinger
W. D. Maschal
J. S. McCollam
W. F. Otis
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YORK *Refrigeration and Air Conditioning*

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

biggest thing in Door Frame Histor
...and growing every day!



Our first Announcement was in February 1946!

It took courage, but our experience of almost half a century told us that a one-piece, all-welded Steel Door Frame for SMALL HOME CONSTRUCTION that could be easily and quickly installed, would be a *better frame*..and prove to be the sensation of the industry. Today the builders know that we were right. And today, too, we are equipped to make deliveries anywhere in the United States. The Building Supply and Lumber Dealers who already are enjoying their share of this profitable business will substantiate what we say. Write us for information regarding the situation in your territory.

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KOVEN WATERFILM BOILERS FOR *Economical* QUICK HEAT!



Today a boiler has to fit into the modern scheme of things. Sell your customers a heating unit that combines service with style...the KOVEN WATERFILM BOILER, scientifically developed to insure economical, efficient performance.

Its patented construction provides quick, uniform heat and a plentiful supply of domestic hot water at all times. Its trim lines and smart jacketing complement any finished basement room.

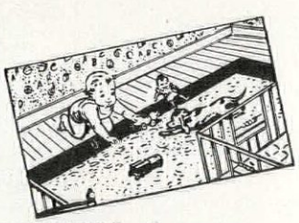
Known for low-cost operation the KOVEN WATERFILM BOILER is relied upon by home-owners, leading architects and industrial builders.

Made for automatic firing with oil, stoker or gas. Available in several models adapted to small homes, apartment houses or industrial plants. Write for detailed information.



EVEN ROOM TEMPERATURE

THROUGHOUT THE HOUSE!



WATERFILM BOILERS, Inc.

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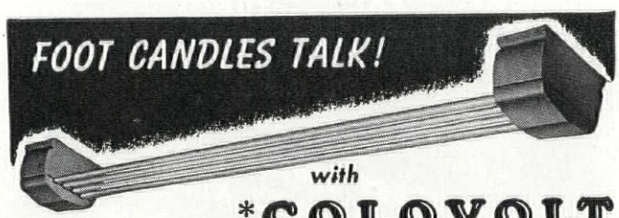
THE RUG AND CARPET BOOK. By Mildred Jackson O'Brien. M. Barrows & Co., Inc., 114 East 32d St., New York 16, N. Y. 158 pp. Illustrated. 6 x 8½ in. $2.50.

Everyone strives to be an enlightened consumer, but information on rugs and carpets is simply not available to the general public. Libraries offer scholarly works on Aubussons or Orientals in particular but no one offers a helping hand to the buyer who stands bewildered, knee-deep in unknown weaves and piles.

Miss O'Brien's book is a level-headed, enlightening guide to the whole field, neither too long nor too short. While she approaches her subject from the viewpoint of a housewife, which might seem a little "sissy" to the more sophisticated male reader, the author has included one chapter that should be invaluable to any one contemplating the sale, purchase, cleaning or specification of carpeting. This chapter, entitled "Out of the Fog," deals with technical terms, trade names, sizes, weaves, linings and manufacture and is supplemented with illustrative plates. Another chapter, "Essential Ingredients," also makes for shrewder bartering in a field famous for the technique Armenian boardwalk vendors made famous. M.S.

100 HOUSES—Selected Designs from Pencil Points—Pittsburgh Architectural Competition. Reinhold Publishing Corp., 330 West 42d St., New York 18, N. Y. 114 pp. Illustrated. 8 x 11¼. $2.50.

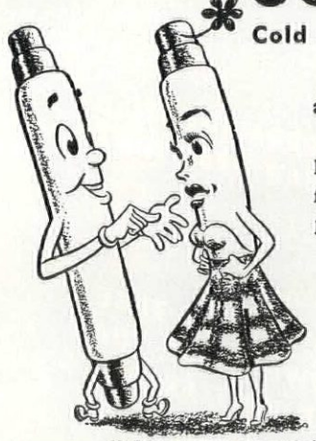
In pamphlet form, a hundred entries for the latest "House for Cheerful Living Competition" offer practically an education in small house design. Program and jury's report are included. First prize went to Ralph and Jean Bodman Fletcher of Cambridge, Mass. whose handsome and efficient H-shaped house features two self-contained units (living and sleeping) connected by a utility core.



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"Lower maintenance cost—longer maintenance of a given foot-candle level—greater dependability because of guarantee (One year of light guaranteed, except for failure due to breakage)—instantaneous starting—no flickering—continuous line lighting."

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Write for illustrated material and technical data.

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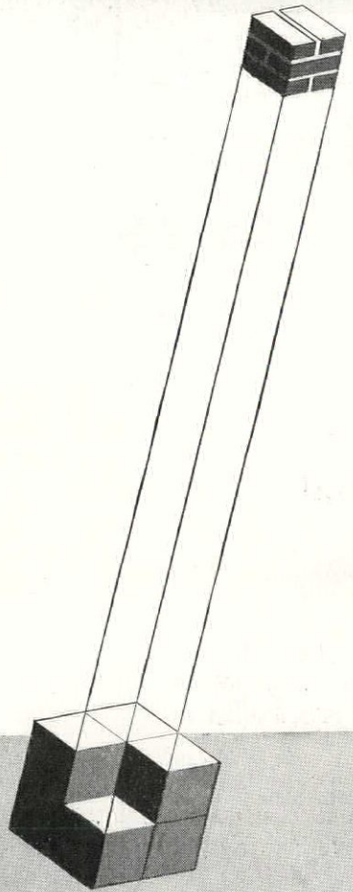


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In January, 1943, a swatch of Lumite screen cloth went into a bath of sulfuric acid in the Lumite laboratory. *Twelve months later* this cloth came out *unharmed*, because Lumite is made of a material* that is essentially unaffected by chemical action. Lumite cannot corrode, rust or fade in salt air, rain, smoke or sun.

*Dow's Saran





economical • fire-safe • beautiful

There's no shortage of modular brick and tile for rental housing!

And these materials are economical to use. They give tremendous structural strength, fire-safety and lasting beauty—all in one reasonable first cost.

Over the years, brick and tile assure lower annual cost. They have great durability and demand little or no upkeep for decorating or repairs.

Modular brick and tile eliminate excessive depreciation—practically guarantee higher resale value. Mighty important considerations from an investment point of view.

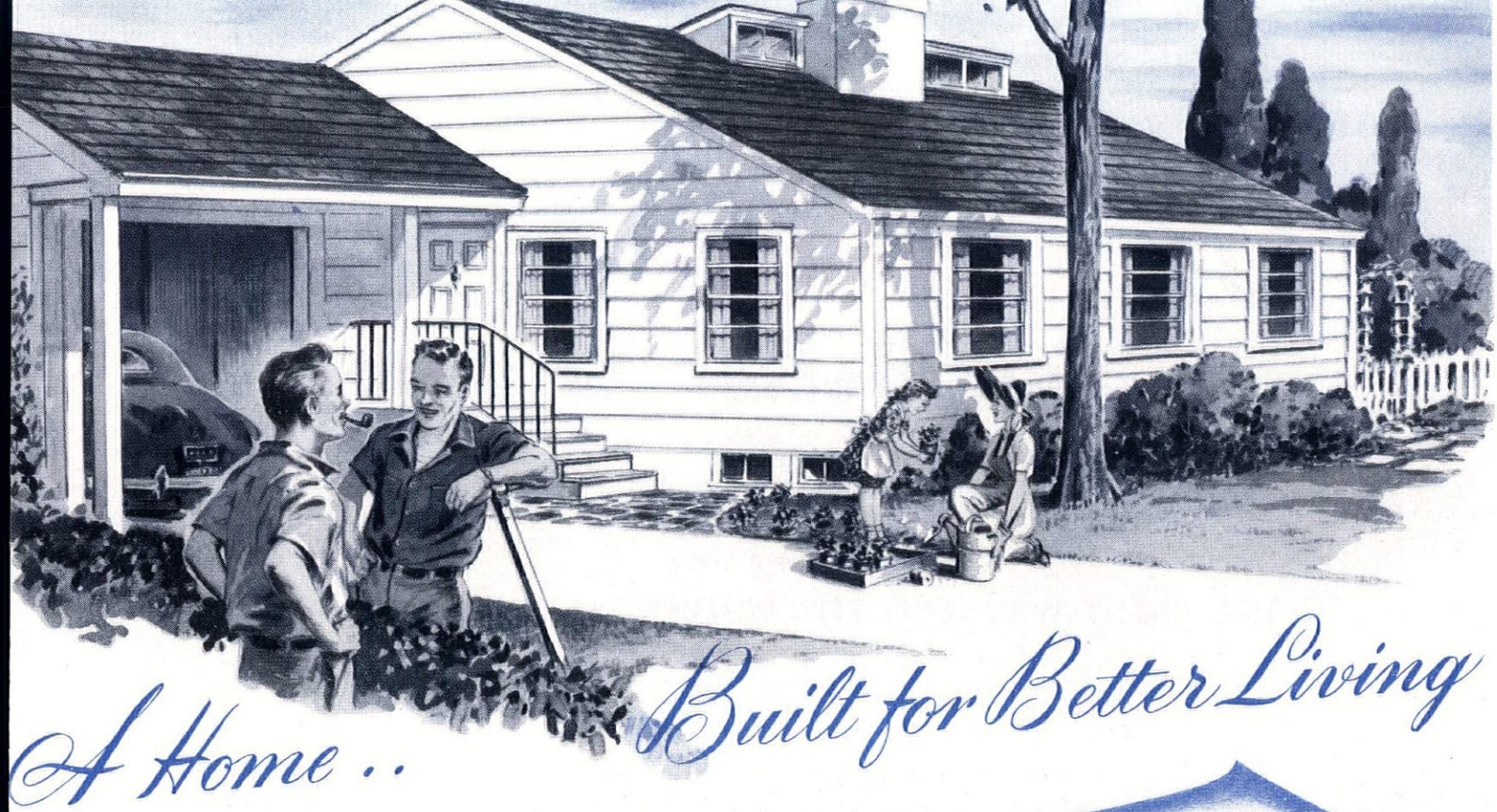
A variety of shapes, modular sizes, textures and colors lend themselves to any desired architectural design and promote over-all attractiveness.

Modular brick and tile save estimating and designing time—help establish uniform building practice—offer economies at the site by reducing expensive cutting and chipping—and fit into modern construction practice of building with modular building materials wherever possible.

Write for two FREE booklets, "The ABC of Modular Masonry," for those interested in the development of coordinated dimensions; and, "Modular Sizes of Brick and Tile," for those wishing to use these sizes in current design. Address Structural Clay Products Institute, Dept. AF-4, 1756 K Street, N. W., Washington 6, D. C.

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NOW IT WILL BE BUILT WITH MODULAR-DESIGNED BRICK AND TILE

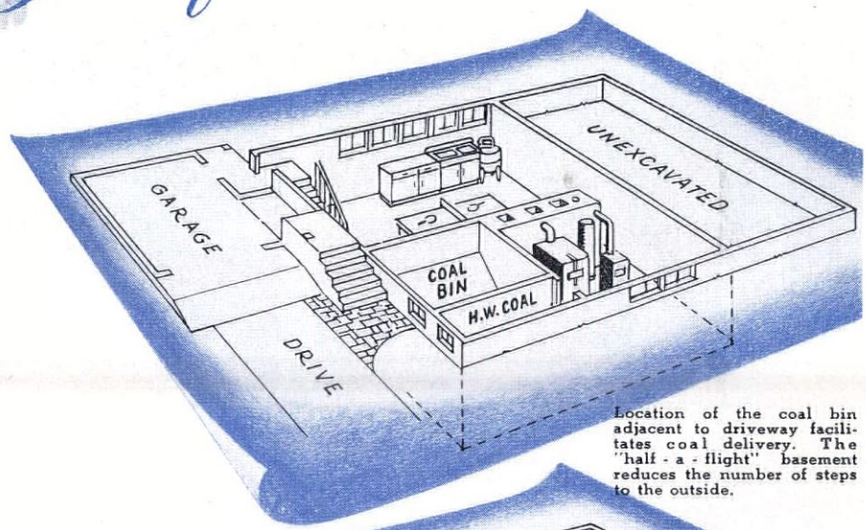


A Home .. Built for Better Living

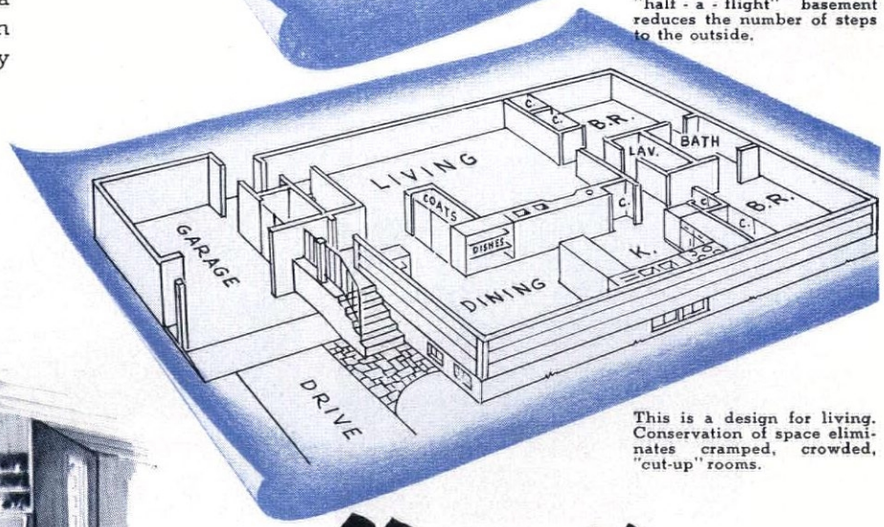
Here's a little home that combines utility, convenience, livability and the magic touch of modern design — all wrapped up in an attractive package, easy to build and easy on the pocketbook.

Based on the "40-inch module", this plan lends itself readily either to "panel prefabrication" or to conventional construction. Monitor windows in the roof add increased cross-lighting and cross-ventilation. This house will receive some solar heating benefit no matter how it is orientated. Vestibules at both entrances make it an exceptionally good plan for a cold climate.

The shallow basement is designed to accommodate a combination playroom and home laundry and a modern coal heating plant. When you design or build, play safe, provide coal storage space and chimneys adequate to handle any fuel. Design for coal . . . "Fuel Satisfaction." It is economical, clean, quiet, odorless and abundant.

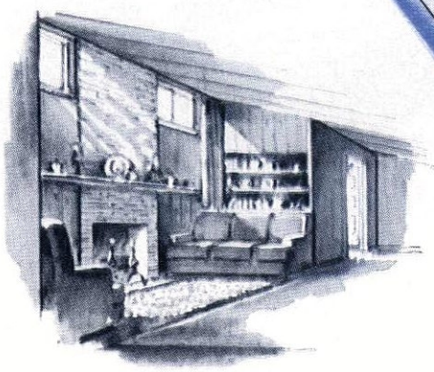


location of the coal bin adjacent to driveway facilitates coal delivery. The "half - a - flight" basement reduces the number of steps to the outside.



This is a design for living. Conservation of space eliminates cramped, crowded, "cut-up" rooms.

The fireplace nook gives you a "den within a living room," and provides the additional, well-lighted "leisure space" so essential to modern living.



BITUMINOUS COAL CHECKS ALL THE WAY

- Initial cost economy. A hand-fired coal furnace is the least expensive of all central heating plants.
- AUTOMATIC HEATING. The cost of a stoker-fired furnace is no greater than the cost of a good installation using any other fuel, over a period of time . . . economy in cost of fuel is the saving.
- FULLY AUTOMATIC HEAT. The ultimate in cleanliness, comfort, safety, convenience and economy is a bin-fed, ash-removal, coal-burning stoker — the cost is little more than a regular stoker.
- CLEAN, SMOKELESS FUEL. Coal today is sized, cleaned and dustproofed at the mine.
- PLENTIFUL FUEL SUPPLY. We have a three thousand year coal reserve. Other fuels may be exhausted while your building is still relatively new.
- CONVERSION POSSIBILITIES. A conversion burner can be installed economically in a coal furnace. The reverse is not possible. Be safe . . . provide for coal.

Norfolk and Western RAILWAY

CARRIER OF FUEL SATISFACTION

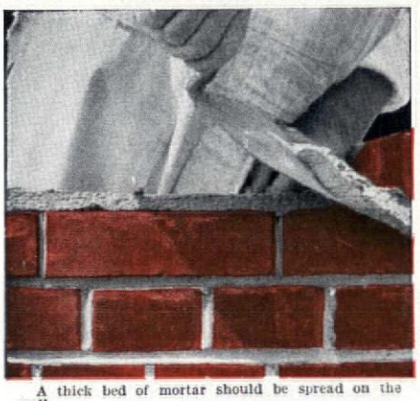
Use BRIXMENT—and Get Better Brickwork!

In bricklaying, as in everything else, there is a *right* way, and a *wrong* way. An example of each is shown below. Study them — *then read how Brixment helps the bricklayer do it the right way.*

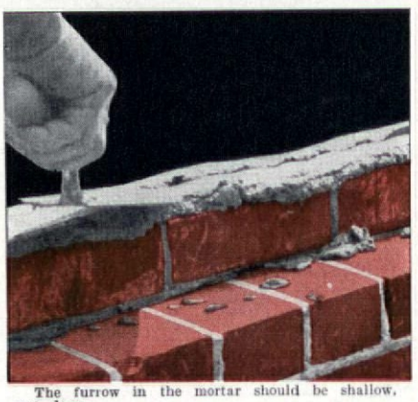
No. 1 OF A SERIES—

THE RIGHT WAY AND THE WRONG WAY—IN BED JOINTS

Mortar for the bed joint should be spread thick. The furrow in the mortar should be made shallow, not deep. Then there will be enough excess mortar in the bed joint to completely fill the furrow when the brick are bedded to the line. This will give full bed joints.



A thick bed of mortar should be spread on the wall.



The furrow in the mortar should be shallow, not deep.

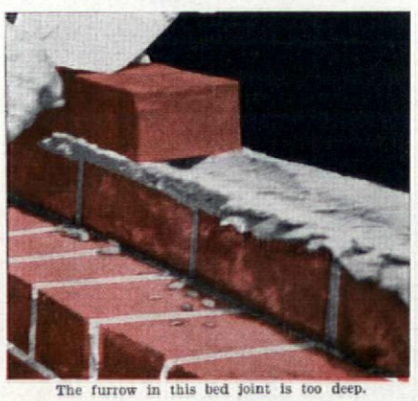


Then the excess mortar will fill the furrow and insure full bed joints.

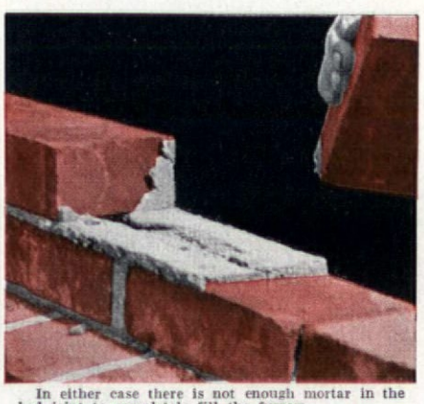
If the mortar for the bed joint is spread too thin, or if the furrow in the mortar is made too deep, there will be insufficient mortar in the bed joint to completely fill the furrow, when the next course of brick is bedded. This will leave a channel along which water, entering from some open joint, may travel until it finds a passage to the inside of the wall.



The mortar in this bed joint is spread too thin.



The furrow in this bed joint is too deep.

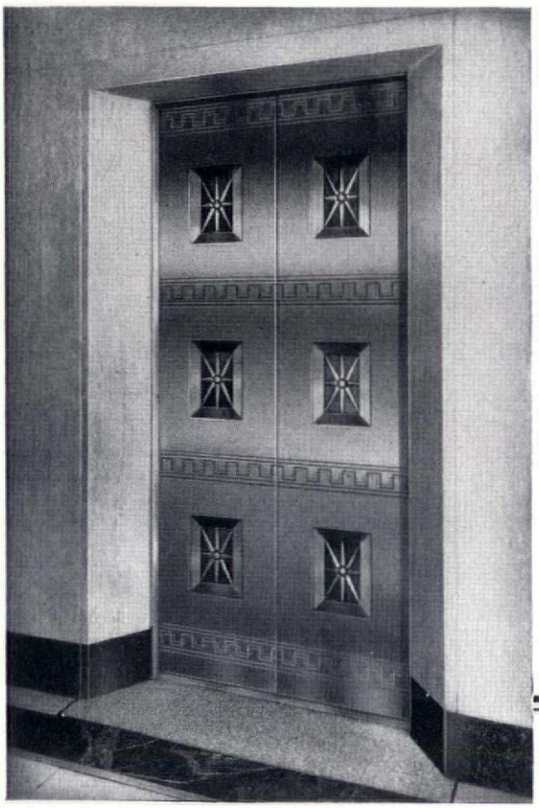


In either case there is not enough mortar in the bed joint to completely fill the furrow.

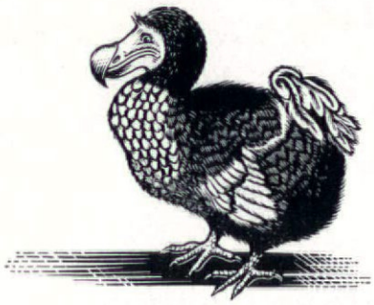
BRIXMENT mortar helps the bricklayer do better work. It is more *plastic*. It stays plastic longer on the wall, and when the bricklayer beds the brick, he does not need a deep furrow or excessive tapping, to place it "to the line."

Brixment mortar has greater plasticity, higher water-retaining capacity and bonding quality, greater resistance to freezing and thawing, and freedom from efflorescence. Because of this combination of advantages, Brixment is the leading masonry cement on the market.

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY



DEAD *as a* DODO



★ Webster describes the Dodo as "a large, heavy, flightless bird, now extinct". All of which pretty well describes the sad state of many elevator entrances still in operation today. Modern work . . . and modern living . . . demands Beauty of design as well as Safety in operation. Dahlstrom Elevator Entrances combine these two factors in abundance. When you are faced with the job of modernizing lobbies and elevator entrances, the easiest and surest approach to the problem is to see your nearest Dahlstrom representative. His knowledge of elevator entrance operation, plus the facilities of our Design and Engineering staffs, will greatly simplify your presentation. Let's get together soon.

Illustrated above: Dahlstrom Elevator Entrances in the Kales Building, Detroit, Michigan.
Smith, Hinchman & Grylls, Architects.
Natural bronze doors with etched bands and cast plaques. Extruded bronze frames.

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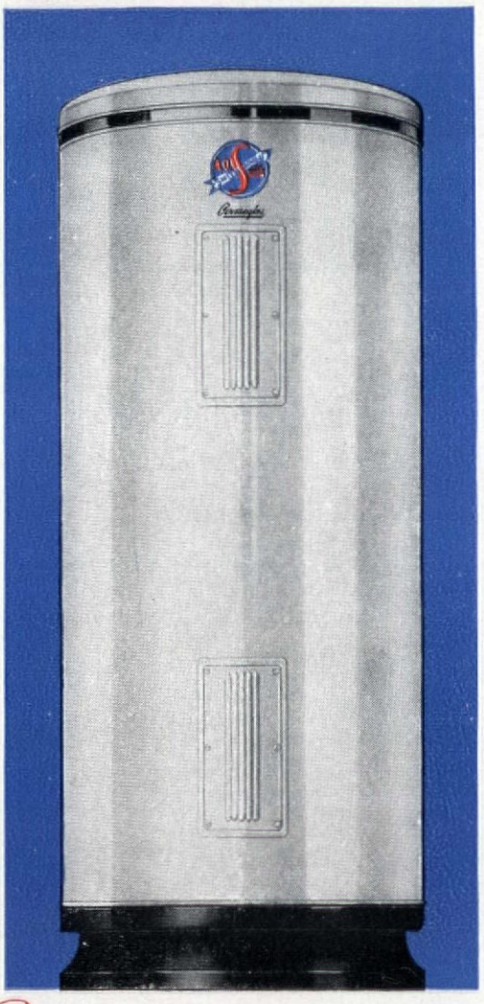
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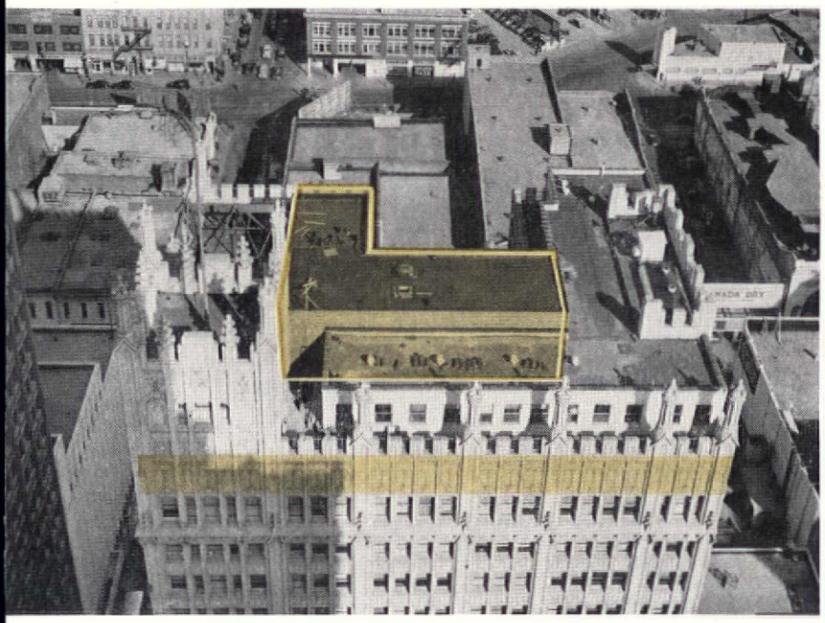
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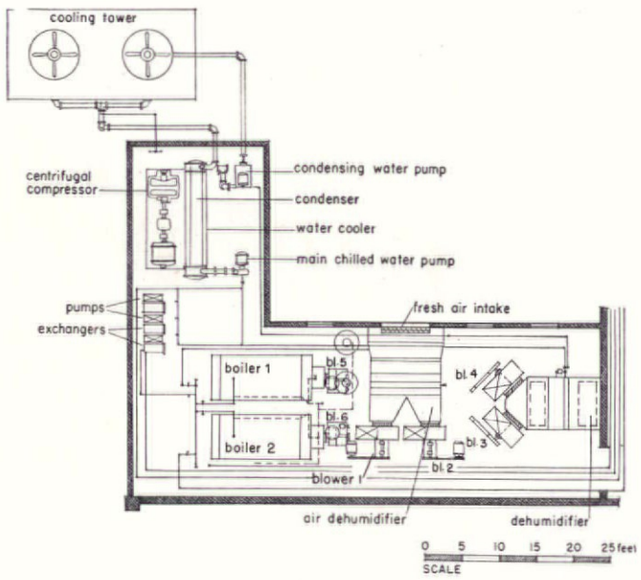
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NEW ROOF-TOP BOILER ROOM now heats Dallas building which lost metered steam supply.



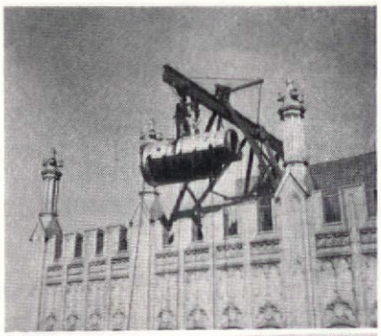
EIGHT-TON BOILERS WERE HOISTED TO ROOF FROM STREET BELOW



NEW HEATING AND COOLING setup consists of central plant in penthouse; a system of steam mains and high velocity conditioned air conduits (which serve individual room conditioners under each window); and an interior system for distribution of dehumidified air.

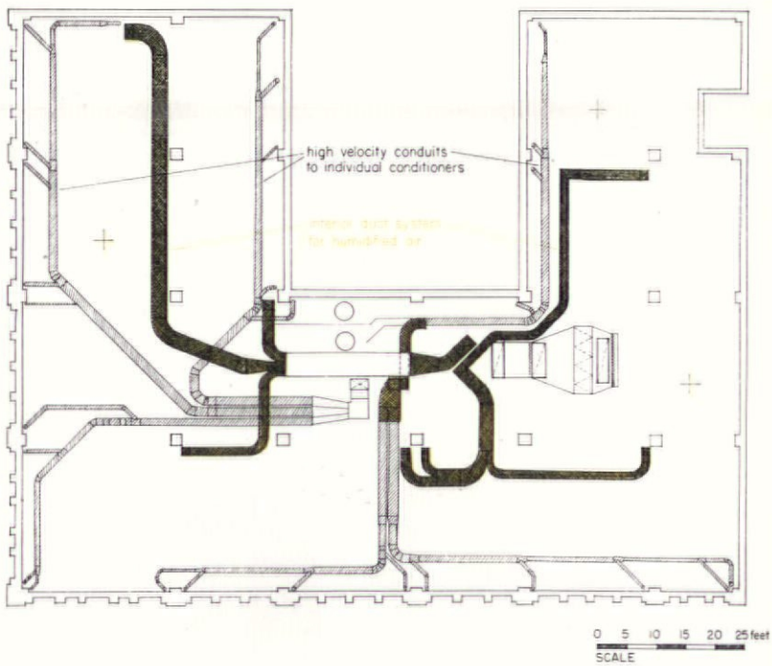
What is probably the world's highest boiler room now sits atop the 16-story Kirby Building in Dallas, Texas. Left an orphan by the sale of its parent building across the street, the 34-year old Kirby found itself without a heat supply. There was no basement space available for a new boiler room, the construction of a subbasement was impractical, and the building had no chimney anyway. Faced with this puzzle, Zumwalt & Vinther, mechanical engineers, turned to the roof as the only logical spot for heating and air conditioning equipment.

Construction of a new penthouse for the mechanical equipment was fairly simple; and the use of induced-draft fans on the gas-fired boilers neatly answered the question of the missing stack. The real problem was that of getting a lot of bulky equipment—including two 16,000 lb. boilers—up to the roof in the first place. Although such weights and bulks are commonplace with riggers, it took quite a bit of study to get adequate support and guying for the rigging. Final solution was a demountable frame with a 24 in. trolley beam which projected about 12 ft. beyond the building face (top, right). Powered from the street, all equipment was safely hoisted, rolled back on the trolley and unloaded on the roof. The rigging was then dismantled and stored on the roof for possible replacement needs.



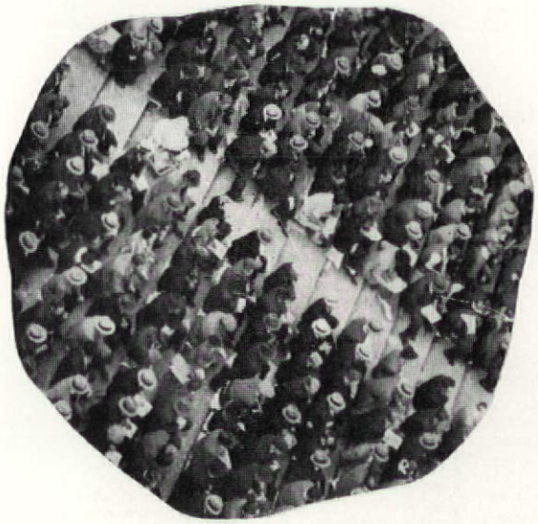






ATTIC SPACE immediately below new penthouse has been cannily used to house the bulky ductwork for both high velocity and conventional air distribution systems.

Photos by William Langley



60,000 people are a lot of people anywhere, any time.

For example, the Polo Grounds bursts its seams when that many people try to get in. Now visualize the Polo Grounds jam-packed, not with ball fans but with the most important people in the **BUILDING** business, so that you could take any seat — yes, any seat — and be surrounded by good customers and prospects.



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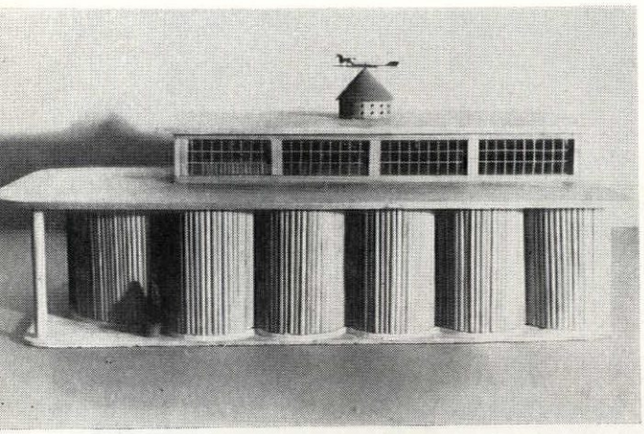
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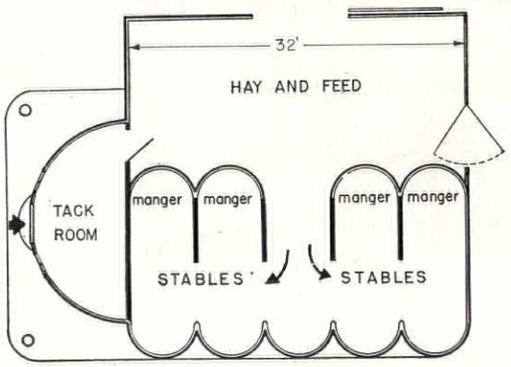
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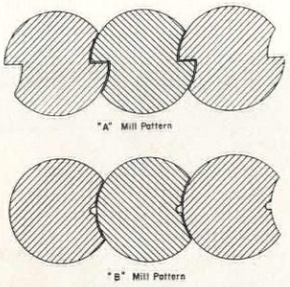
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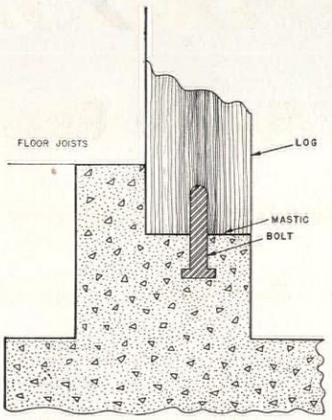
MODERN VARIANT OF STOCKADE construction proposed as low-cost use for second growth timber.



STABLE DESIGN employs log pole wall system in pattern "B" to achieve warm, cornerless stalls.







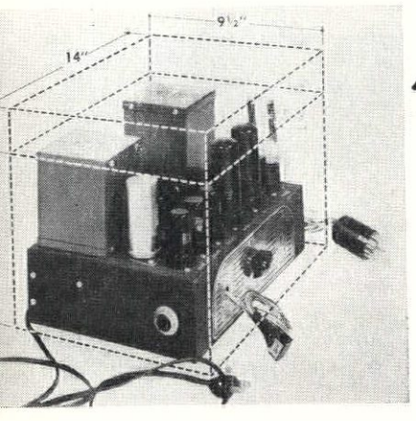
POLE WALLS are fixed to footings by stud bolts, fixed at top by continuous plates.

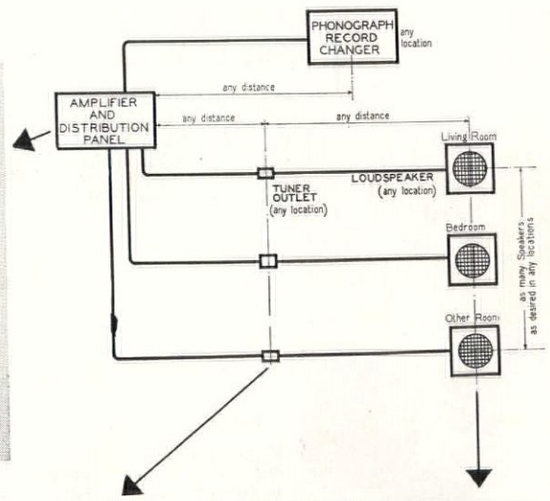
A low-cost structural application for some of the northwest's vast areas of small lodgepole pine has been proposed by Mildred Benson, industrial designer of Dallas, Ore. Miss Benson would use small portable mills to process trees into 6 in. poles, milled in two patterns shown at left, cured and seasoned. In a variation of the oldtime stockade, these poles would then be set on stud bolts, imbedded 3 ft. o.c. in concrete footings, and fixed along the top by metal plate, prepunched for nailing. All joints would be caulked after erection to yield warm, weathertight walls. Chief advantages of the system are its low cost (Miss Benson estimates $300 for material in stable at left), abundance of raw material and ability of semi-skilled labor to process or erect it. In addition, mill pattern "B" permits any type of free-curving wall desired.

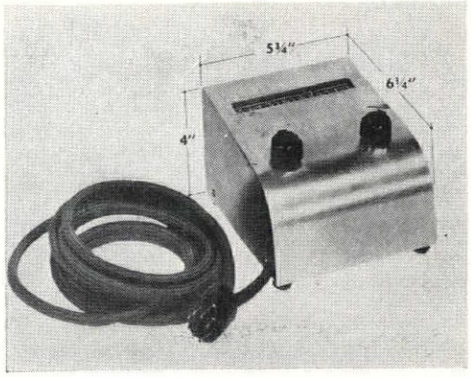
The lodgepole pine, so-called "weed" of western forests, is at present used only for telephone poles, piling and pulp.

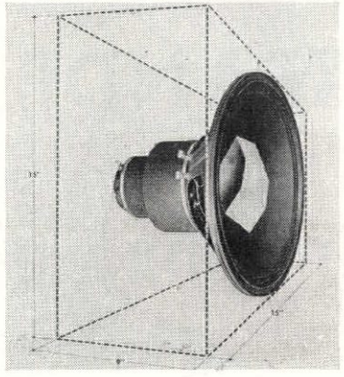
BUILDING REPORTER

BUILT-IN HOME RADIO AND SOUND SYSTEM provides high fidelity sound reproduction, eliminates costly cabinet.









Soundcraft, a versatile built-in home radio and sound system, combines advantages of a custom-engineered installation with those of a mass produced and standardized assembly. Featuring high fidelity performance, simple installation, and concealed equipment, it is said to provide the finest type of home radio available at the lowest possible cost. Four major parts comprise the system: a portable tuner, amplifier, record player and one or more speakers. It also includes an antenna and wiring to connect the units. Amplifier has an undistorted output of 15 w., sufficient to provide the proper loudness level in any room. It serves the entire radio-phonograph installation and can be placed in any out-of-the-way place. The compact portable tuner, about the size of a cradle telephone, can be plugged into a tuner outlet wherever there is a loudspeaker. Any number of speakers can be used. Available in two types, the Supersound speaker covers the complete range of human hearing from 30 to 15,000 cycles per second. The Deluxe has a range of 80 to 12,000 cycles per second. Both units are mounted with their connections on plywood panels to facilitate installation. The phonograph-record changer can be located in any convenient place and is turned on by a switch located on the loud speaker. When last record is finished the system automatically shuts off. Soundcraft will be available through retail lumber dealers and will be priced as follows: Super Soundcraft system, consisting of 1 Supersound speaker, tuner, amplifier and all necessary outlets, plugs, etc. (less bulk cable), at $550; DeLuxe Soundcraft System consisting of 1 Regular speaker, tuner, amplifier, outlets, plugs, etc. (less bulk cable), at $375.

Manufacturer: Soundcraft Radio Div., Reeves Sound Studios, Inc., 10 E. 52nd St., New York, N. Y. *(Continued on page 178)*

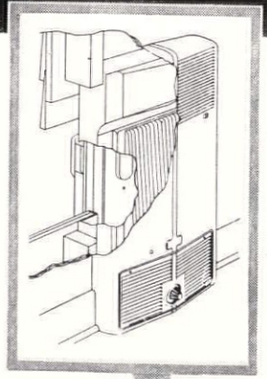
For Architect, Builder, Owner . . .

SAF-AIRE

New Miracle Gas Heater

PROVIDES OUTSTANDING ADVANTAGES NO OTHER ZONE-HEATING METHOD CAN MATCH!





SAF-AIRE Model 20

Input approximately 20,000 BTUs per hour. Burns natural, manufactured or LP-gas. Installed between 16″ wall studs. Room Panel 37½″ high, 18″ wide. Thermostatic control at floor level. Approved by American Gas Association.

Just look at the advantages you get with SAF-AIRE—revolutionary new gas-fired space heater that vents all fumes outdoors without costly ductwork, chimney or blower:

For Architects—Ideally suited to all types of structures—especially ranch-type homes and low-cost housing units—SAF-AIRE Gas Heaters can be located in any outside wall, in any room, and they extend less than 4 inches from the wall. Inside and outside panels can be painted to match surrounding walls or trim. Installation in no way interferes with plumbing or wiring.

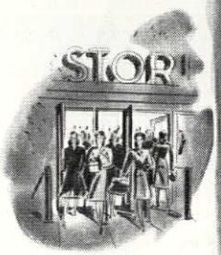
For Builders—Made entirely of aluminum, SAF-AIRE weighs approximately 45 pounds—is quickly and easily installed by one workman without cutting joists, studs or plates. There are no chimneys to build, no ducts to install, no electric connections to make. And because SAF-AIRE exhausts 100% of its products of combustion to the outdoors, annoying and unhealthful condensation inside the home is eliminated!

For Owners—SAF-AIRE offers all the advantages of room-by-room heating—PLUS absolute safety and lowest costs! More than 20 gas utility companies have proved SAF-AIRE to be fireproof, explosion-proof and asphyxiation-proof under all conditions of weather. It operates up to 20 percent more efficiently than conventional gas heating systems; and since SAF-AIRE has no moving parts, maintenance is negligible.

Write today for full details about SAF-AIRE—the perfect answer to *your* heating problem!

SAF-AIRE **HEATING RESEARCH CORPORATION**
516 N. Jefferson St., Muncie, Indiana

MAGIC DOORS open the way to more efficient buildings!

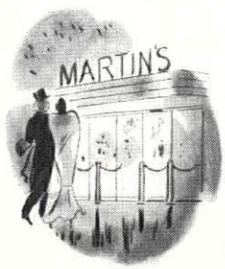


Bank, Store or Office Building



Hospital and Institution





Hotel or Restaurant

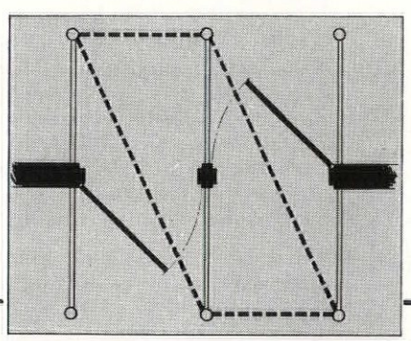


Industrial Plant Communicating Doors

YOU can't afford to ignore Stanley Magic Doors, recognized as a solution to door and traffic problems wherever used.

Self-operating – actuated by a tiny beam of light – Magic Doors open at approach, stay open during passage, close automatically. They speed traffic, improve service, protect air-conditioning, provide other desirable advantages for buildings, new or old. Stanley Magic Doors are easy to install, and their simple design and rugged construction assure long, trouble-free operation.

Place Stanley Magic Doors at the top of the list of modern features in your building plans—and write for information. The Stanley Works, Magic Door Division, New Britain, Connecticut.



Stanley Magic Door Controls are adaptable to almost any type of door and door arrangement, each individually engineered.

STANLEY

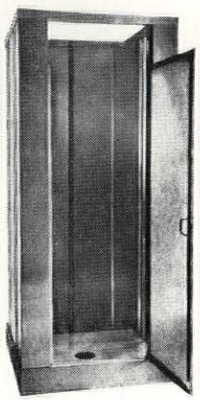
STANLEY MAGIC DOORS

Require No Hand to Open

BUILDING REPORTER

ALUMINUM SHOWER CABINET for use in new or remodeled bathrooms can be assembled in less than 5 minutes.

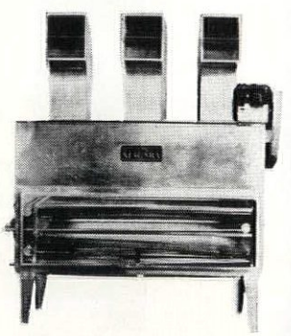
Ames Aluminum Shower Cabinet is composed of five formed aluminum sections which slide into interlocking flanges to provide a completely watertight fit. Featuring lightweight, simple construction, the complete assembly can be made by one man in less than five minutes. Sides and back of the cabinet fit to the bottom of the pan to provide strength, rigidity and watertightness. The receptor, formed as one integral piece and having an effective depth of 4 in., insures against leakage. It weighs only 23 lbs. and can be installed on either finished or unfinished floors. The cabinet can be enclosed with any desired material, left with its natural aluminum finish or painted to match the bathroom. It measures 32 in. x 32 in. x 80 in. and comes complete with curtain rod, receptor, chromium plated brass caulk-type drain and rubber gasket. If desired, the unit may be provided with a standard glass shower door.



Manufacturer: W. R. Ames Co., 150 Hooper St., San Francisco, Calif.

HIGH PRESSURE FAN HEATER for heating large spaces.

The Niagara High Pressure System Fan Heater uses a dual coil system to obtain complete utilization of both the latent and sensible heat of high pressure steam in heating. Eliminating complex secondary piping, this coil system is installed in a heater of standard design which moves air by centrifugal fans. The high pressure steam is condensed in a finned coil, the condensate flowing into a trap from which it is admitted to the regenerative entering header: here it flashes into vapor. Any of the high pressure condensate remaining liquid at this point is drained directly to the final condensate return header by a hairpin bend tube, where it gives off heat into the air stream. The vapor condensing coil has its top (or vapor) leg finned and steeply pitched. The lower (or condensate return) leg is relatively flat. It leads to the condensate return header in which a weir keeps the liquid level high. In this leg condensate is in contact with the coldest portion of the air stream. This sub-cools the condensate below its relative return temperature. The weir has a bleed hole for draining the condensate upon shut-down. From the return header the condensate returns to the boiler. Vacuum return is vaporfree and fully efficient, returning the condensate evenly and without flashing, at low pressure and temperature. Niagara High Pressure Fan Heaters are manufactured in custom sizes for large scale installations.



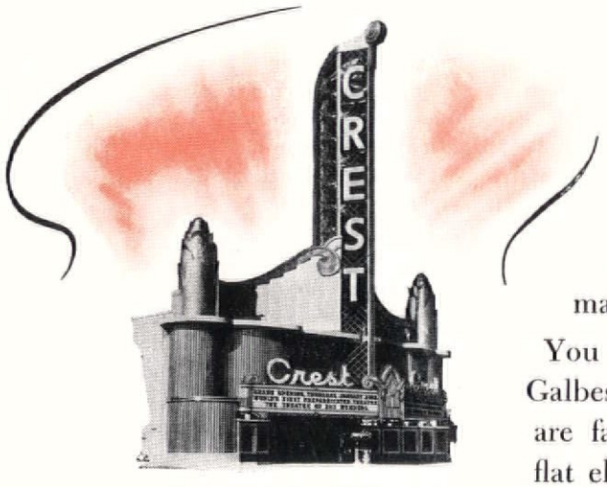
Manufacturer: Niagara Blower Co., 405 Lexington Ave., New York, N. Y.

PORTABLE ELECTRIC WINDOW VENTILATOR supplies 12 complete air changes hourly in average size room.

Providing no-draft ventilation, Splend-Aire portable electric

(Continued on page 180)

THIS YOU CAN DO WITH Q-PANELS and... NOW!



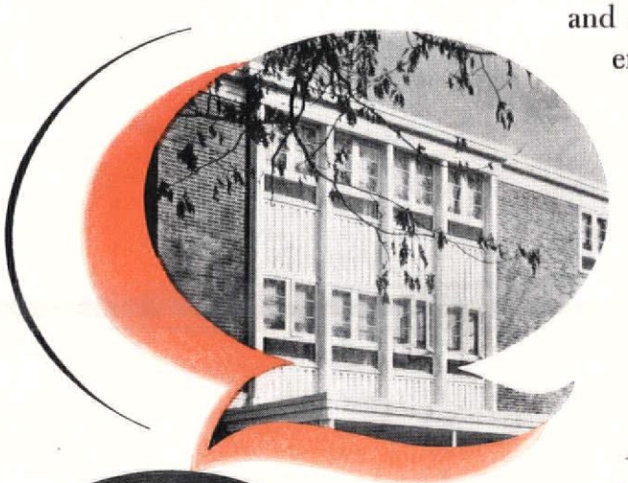
Architects are using them—not only because Q-Panels actually are available now—but also because their efficiency overcomes many everyday problems.

You can get Robertson Q-Panels in aluminum, steel, stainless or Galbestos on either or both of the flat or fluted surfaces. The panels are fabricated 2′ wide and up to 25′ long. Between the fluted and flat elements is 1½″ of insulation. Q-Panels surpass in thermal value a 12″ dry masonry wall. They weigh less than 5 pounds per sq. ft., and can be erected so fast that a crew of only 25 men has often erected a wall area equal to ⅓ acre in just one day.

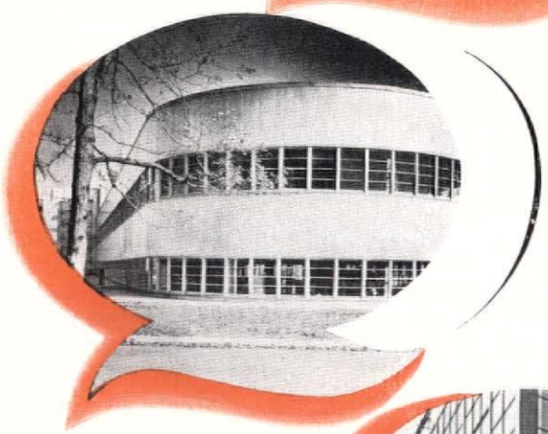
It's a lot easier to hang a wall than to pile it up.

This efficiency recommends Q-Panels wherever conventional, heavy masonry walls have been used in commercial and industrial buildings.

With flat and fluted surfaces to vary, architects are achieving effects in shadow and light of noteworthy beauty. Typical of important Q-Panel structures now in construction are:



Federal Telecommunications Inc., Nutley, New Jersey
Architects, Giffels & Vallet and L. Rosseti, Detroit

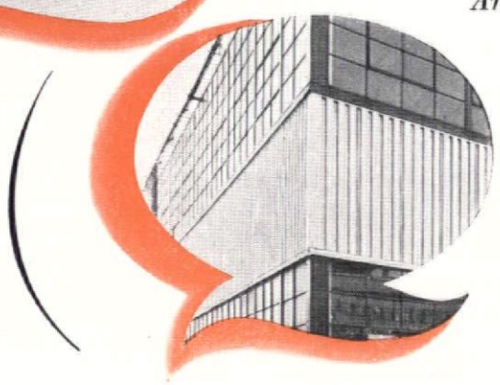


J. S. Dillon & Sons Food Stores Company, Hutchinson, Kansas
Architects, McCrakin & Hiett

Freuhauf Trailer Company, Avon Lake, Ohio
Engineers, J. Gordon Turnbull, Cleveland, Ohio

Duplan Corporation, Winston-Salem, North Carolina
Architects, Lacey, Atherton, Wilson & Davis, Harrisburg, Pennsylvania

Doubleday Doran Country Life Press, Garden City, Long Island and Hanover Press, Hanover, Pennsylvania
Architect, H. T. Lindeberg, New York City



General Electric Research Laboratories, Schenectady, N. Y.
Architects, Voorhees, Walker, Foley & Smith, New York City

For information please call your Robertson representative or write:

H. H. ROBERTSON CO.

2403 Farmers Bank Building
Pittsburgh 22, Pennsylvania

Offices in Principal Cities
World-Wide Building Service



a Mountain of Material at your service

In the 62 years The Georgia Marble Company has been operating it has accumulated a vast amount of material pertaining to the use of Georgia Crystalline Marble that is invaluable as a reference source. When you are considering the use of Georgia Marble all this material is available to you. It is only necessry to indicate the type of usage that interests you. Our Sales and Service organization will prepare a packet of pertinent photographs and detail data and either bring it or send it to you, together with samples of Georgia Marble — "the marble with the sparkling crystal."

A reference service for you. Our files contain data on exterior and interior applications for theaters, store fronts, courthouses, office buildings, post offices, residences, churches, banks, government buildings, schools, museums, stairs, shower stalls, wainscotting, entrances, mantels, and other uses. For prompt service, contact our nearest Sales and Service Office listed below.

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The Marble with the Sparkling Crystal

Produced by THE GEORGIA MARBLE COMPANY *of Tate, Georgia*

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WASHINGTON 5, D.C., 410 Bond Bldg.
NEW YORK 16, N.Y., 419 Fourth Ave.
ROCHESTER, N.Y., 120 Village Lane
PHILADELPHIA 2, PA., 1256 Commercial Trust Building

BUILDING REPORTER

window ventilator can be used in any room of the house. It requires the installation of only four screws for positioning, and becomes a portable unit for all windows so equipped. It does not interfere with window operation and, according to the manufacturer, offers all the desirable features of built-in ventilation at only a fraction of the cost. In an average room, Splend-Aire supplies 12 complete air changes an hour. It instantly disposes of cooking odors in the kitchen, provides ventilation without drafts or noise in bedrooms and living rooms, and removes smoke and stale air from recreation rooms.

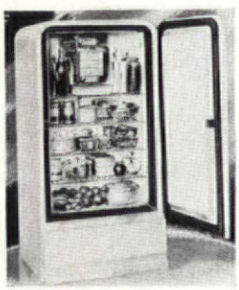


Available in three models to fit windows from 22 in. to 27 in., 24 in. to 31 in., and 27 in. to 36 in. wide, the unit is finished in ivory enamel with chrome trim. Motor is quiet and vibrationless and is provided with an 11 ft. cord, switch and rubber plug. Operation is for 110 v., 60 cycle, AC.

Manufacturer: The Metal-Tex Corp., 1600 Junction Ave., Racine, Wis.

APARTMENT REFRIGERATOR provides 6 cu. ft. storage capacity in cabinet size of former 4 cu. ft. models.

This compact Frigidaire model incorporates 6 cu. ft. of food storage space in a cabinet about the size of conventional 4 cu. ft. models. Produced exclusively for apartment houses and multiple housing projects, it provides 11.6 sq. ft. of shelf space in a cabinet measuring only 51 11/16 in. high, 24 in. wide and 26¾ in. deep. Interior of the unit is finished in porcelain enamel and includes large freezer compartment, four full width shelves, aluminum cold storage defroster tray and automatic lighting. The super freezer compartment is equipped with two ice-making trays and has space between the two freezing shelves for the storage of 15 lbs. of frozen foods. A control switch with ten dial adjustments governs food storage compartment temperatures and regulates freezing speeds. This new model is equipped with Frigidaire's exclusive sealed compressor unit, which is said to use about the same amount of electrical current as an ordinary lamp bulb.



Manufacturer: Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton, Ohio.

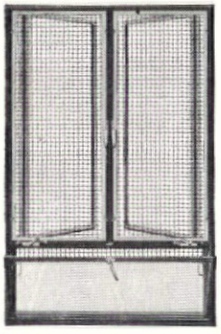
IRONER folds away vertically in table height ironer cabinet.

Apex Fold-a-matic ironer introduces a new design principle whereby the roll, shoe and other operating parts fold away vertically in the ironer cabinet. Shoe and roll swing easily outward from this vertical position to a horizontal plane for operation. The cabinet, 36 in. high, 18 in. wide, 25 in. deep, does not have to be moved for ironing performance and is compact enough to be used in a combination kitchen-laundry. Top offers convenient working space. Fold-a-matic operates on the patented Apex "floating-roll" principle, the roll moving toward and

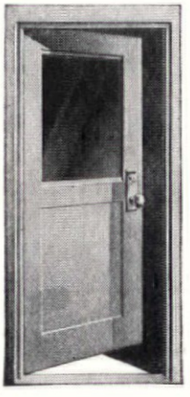


(Continued on page 184)

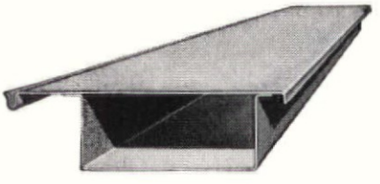
3 PREFABRICATED UNITS THAT SPEED BUILDING ENCLOSURE



WINDOWS—well-known Fenestra craftsmanship means better-looking, more durable windows for any type of building. They're designed for economy—most of them standardized in sizes to fit modular construction for quick installation. Wide choice of types and sizes.



DOORS—Swing-type doors complete with hardware and frames. Slide-type doors and overhead-type doors, too. All are standardized in size for savings in first cost—plus marked savings in installation time, labor and materials. Whether you plan to build or remodel, see what Fenestra has to offer.



PANELS—for floors, walls, roofs, ceilings, partitions. Prefabricated in a wide range of types enabling you to meet requirements for almost any kind of building. Designed for speedy erection—they are ready for application of paint, plaster, plywood, linoleum or other finish of your choice.



FOR AMERICA'S FINEST BUILDINGS

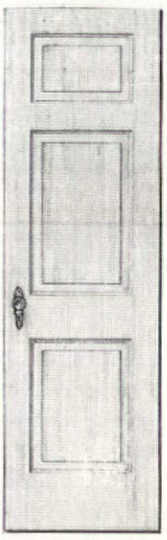
New ideas teamed up with long experience make an unbeatable combination. That's what you get from Fenestra. We've taken our experience as America's oldest and largest steel window manufacturer and put it to work in these three groups of basic building materials . . . designed and coordinated to help you erect better buildings—faster. Look them over. See Sweet's Architectural File (Sections 16a-9 and 3c-1). Better yet, call us for complete information.

Fenestra **BUILDING PRODUCTS**

DETROIT STEEL PRODUCTS COMPANY
Dept. AF-4, 2251 East Grand Blvd., Detroit 11, Michigan



What Price Friendliness?



This 3-panel door — a variation of the standard Ponderosa Pine 6-panel door—is used in areas calling for a narrower door. Stock design doors of Ponderosa Pine are precision-made for better fitting. These doors sand satin-smooth for receiving paint, stain or varnish—the wood takes nails and screws without splitting. Ponderosa Pine door and window frames are properly seasoned and kiln dried—absolutely square, with joints that are made to remain tight.

Repeatedly, surveys show that people want houses that make them feel "at home"—*friendly* rooms in which architectural design provides a feeling of warmth and comfort.

You can create such interiors—at modest cost—with stock design Ponderosa Pine doors and windows.

Ponderosa Pine paneled doors capture light and shadow in interesting patterns—help you add character to dwellings you plan. Ponderosa Pine windows combine grace and charm with the natural insulating qualities of wood. And all Ponderosa Pine Woodwork is friendly to the owner's pocketbook—because smooth-grained Ponderosa Pine holds paint or other coatings easily—and because Ponderosa Pine is durable.

For reference, you'll want a copy of "Today's Idea House"—Ponderosa Pine's booklet containing photographs of typical interiors made friendly with Ponderosa Pine doors and windows. Mail the coupon for your copy!

For Friendly Living . . .

Ponderosa Pine

WOODWORK



Ponderosa Pine Woodwork
Dept. PAF-4, 111 West Washington Street
Chicago 2, Illinois

Please send me a free copy of "Today's Idea House."

Name .....

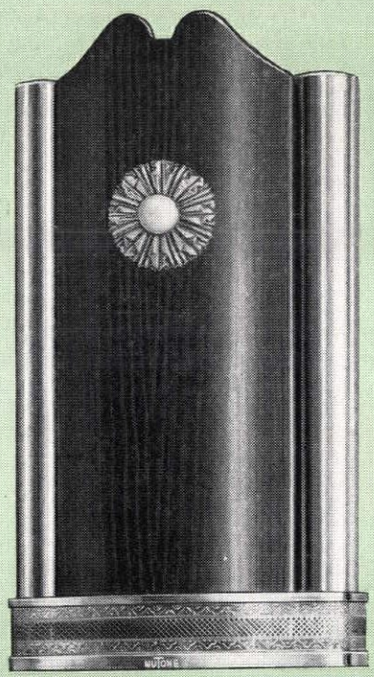
Address .....

City ..... *Zone* ..... *State* .....



now!

EIGHT NOTES IN A CHIME ONLY 14 INCHES HIGH!

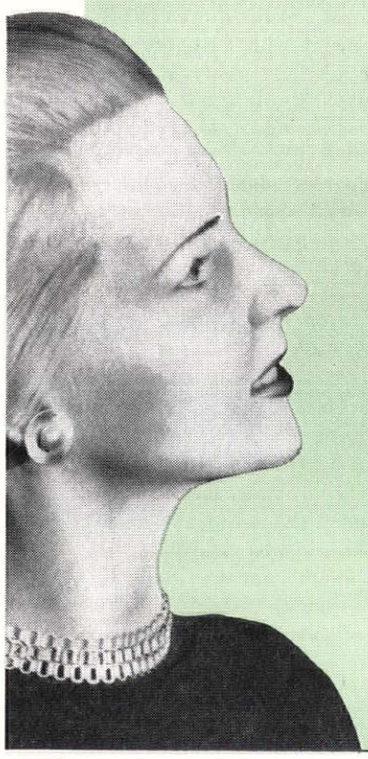


NUTONE
STYLE No. K-40
"SYMPHONIC"
$26.95 (list)

Here is your answer to the space problem often presented by multiple-tone chimes. It's the NUTONE "Symphonic" Door Chime—the most compact eight-note Westminster chime ever built!

You'll find NUTONE Door Chimes unique in many ways. There are fourteen models, in styles and colors to suit every type of interior design and finish. Each is engineered for easy installation. Then, too, they are priced from $3.95 to $59.95 (list) to meet cost specifications on every kind of home.

A new folder gives complete details on all fourteen NUTONE Door Chimes. To get your copy, address your nearest NUTONE office.



...better living means better listening, too!

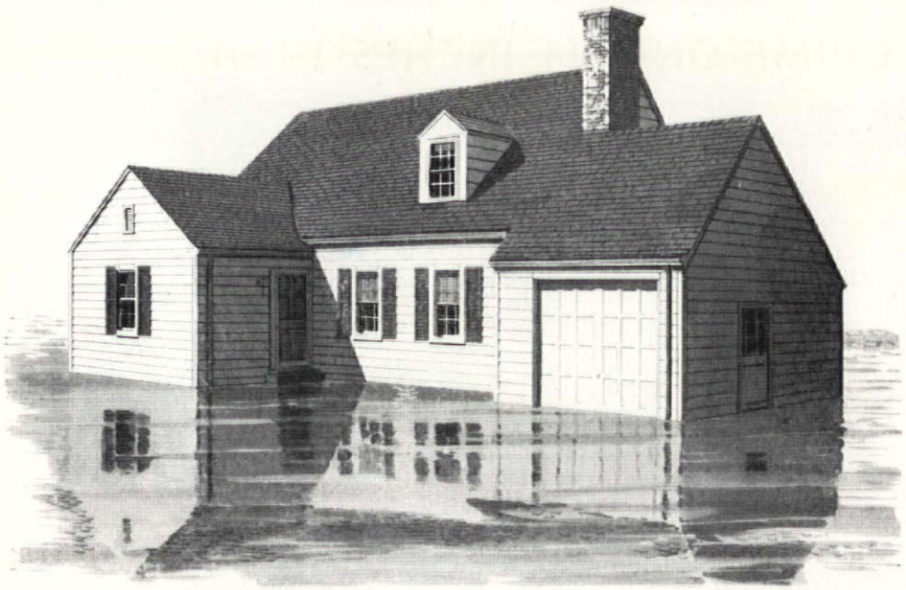
NUTONE IS THE WORLD'S LARGEST MAKER OF DOOR CHIMES

NUTONE TRADE MARK DOOR CHIMES

NUTONE, INCORPORATED, MERCHANDISE MART, CHICAGO 54;
200 FIFTH AVE., NEW YORK 10; 931 EAST 31st ST., LOS ANGELES 11; TERMINAL SALES BLDG., SEATTLE 1

pressing against the stationary shoe. Roll is 26 in. long, 6½ in. in diameter, has two ironing speeds and a stationary position for pressing. Both knee and finger-tip control govern its action. Shoe is provided with dual, accurately calibrated thermostats which allow temperature selection in 50° steps from 300° to 500°. Either half or all of the chrome ironing surface can be used at once. Other features of the unit include a ⅛ h.p. motor, new gear design, convenient safety switch for releasing roll pressure and plastic finger guard to prevent hands from touching shoe when inserting clothes. Cabinet is finished in white enamel and has rubber kick plate in front to prevent marring.

Manufacturer: Apex Electrical Manufacturing Co., 1070 E. 152nd St., Cleveland, Ohio.



FIRMEST FOUNDATION
for modern building!

Good water is basic! Architects and builders know that soft water is an essential factor in the planning of modern homes and buildings. For today, home-owners expect the convenience of softened water: easier, whiter washes; lightened housework; and rich, quick-cleansing suds.

When local water supplies are poor, you can provide soft, clear water with Permutit* Water Conditioning. Whether your plans call for private homes, hospitals, laundries, restaurants, or industrial plants, Permutit will supply *good* water *all* the time!

Write for information to The Permutit Company, Dept. AF4, 330 West 42nd Street, New York 18, N. Y., or Permutit Co. of Canada, Ltd., Montreal.

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PERMUTIT

WATER CONDITIONING HEADQUARTERS



ELECTRIC RANGE LINE features automatic conveniences, new model for small spaces.

Scheduled for April delivery, Landers, Frary & Clark recently unveiled its 1947 line of Universal household appliances. Claiming fundamental improvements rather than mere restyling of prewar items, the new Universal line includes new electric ranges, a two-speed washer, ironers, vacuum cleaners, electric blanket, toasters, irons, pressure cookers, etc.

▸ The newly-designed fast cooking Speedliner range comes in eight models to meet specific class demands. A DeLuxe model, incorporating many automatic convenience features, tops the line. It provides three new super heat monotube thrift burners with multi-heat control; a thermostatically controlled auxiliary Thermo Chef Cooker and two large Tru-Bake automatic ovens, 16 in. x 16 in. x 19 in. The fast-cooking monotube burners swing up to facilitate cleaning and are provided with multi-heat control for selection of any desired degree of cooking heat. The two smaller units provide 1250 w. at full heat, the large burner 2100 w. Thermostatically controlled, the 1600 w. Thermo Chef auxiliary cooker bakes, roasts, steams or stews. For use whenever the large oven capacity is not required, it is heated by a side-wound unit and incorporates a look-in lid of heatproof glass. The two large Tru-Bake ovens feature positive heat control. New push-button preheat switch and oven-exposed thermostat combine to give even temperature control through successive bakings. Timer provides completely automatic control. Other features of the DeLuxe model include: one-piece steel body; one-piece top and back splasher; recessed oven floodlight; four oven units; Tel-A-Switch panel with Signalite; Select-A-Trol to bring oven, Thermo Chef or convenience outlet into operation; automatic timer; Minit Minder; utility drawer; platform lights; Redi-recipe holder and mirror; convenience outlet. Retail price is $385.95.



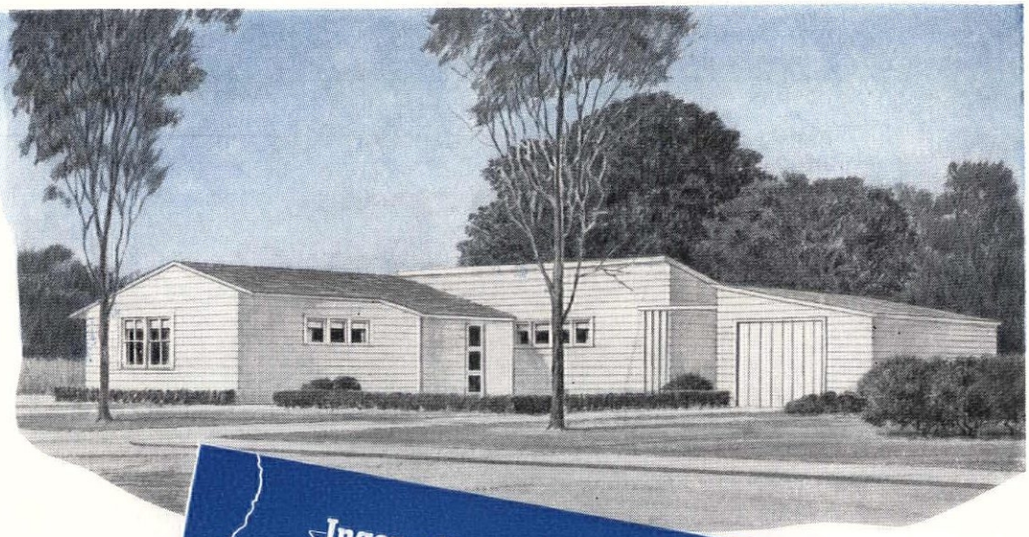
▸ A completely new model, the Bantam electric range is designed for small space requirements such as apartments, small homes, camps, etc. Unlike most electric stoves, it plugs into any 110 v. circuit and requires no special wiring. Measuring only 42 in. high, it provides an oven large enough to roast a 22 lb. turkey, broiler action and two units for surface cooking. The range is constructed with imbedded coils wrapped around the all-steel, heavily insulated, porcelain oven lining. Thermostatically controlled, these coils provide a maximum input wattage of 1650 w. for roasting or baking. Two units mounted on a steel frame are interchangeable for broiling operation or for surface cooking. To cook, the surface unit assembly is inserted into a built-in receptacle in the bottom of the oven and door is left open. To broil, the surface unit assembly is inserted into a top built-in receptacle and door is closed. Six positions are provided in the range for the two sliding shelves, and a 6 ft. cord is permanently attached. Cabinet below provides two

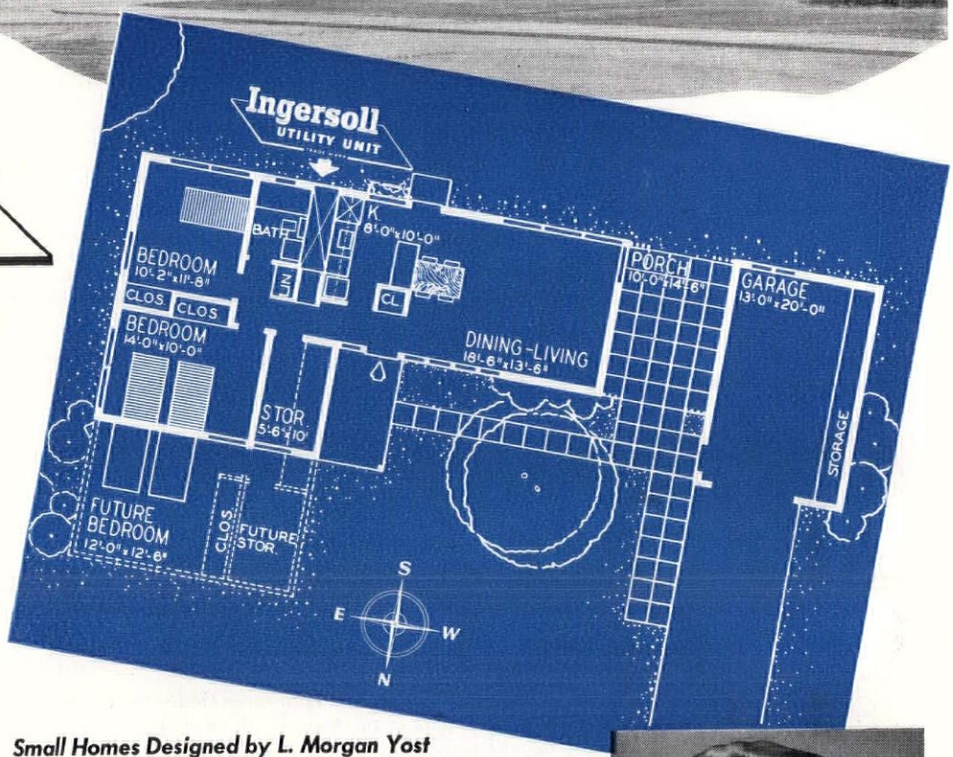


(Continued on page 188)

More and More Architects Are Specifying the Ingersoll UTILITY UNIT

TRADE MARK





Because:

1. The Ingersoll Utility Unit is an architect's product. It was conceived by an architect; produced in collaboration with architects; job-tested by architects.

2. The unit occupies less than 80 square feet of floor space, gives the architect valuable extra cubage without restricting creative design.

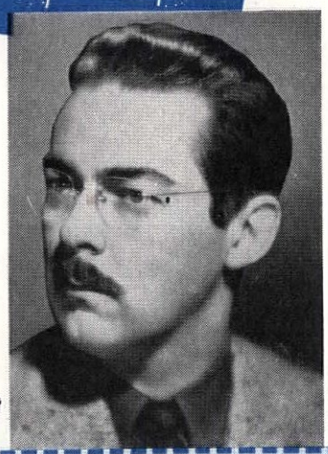
3. This complete, engineered assembly assures the architect of an attractive kitchen, bathroom and heating plant, including all basic connections, without making detailed specifications.

4. The Ingersoll Utility Unit has been thoroughly tested in a wide variety of homes designed by eight leading architects. These homes have been "lived in" for more than a year.

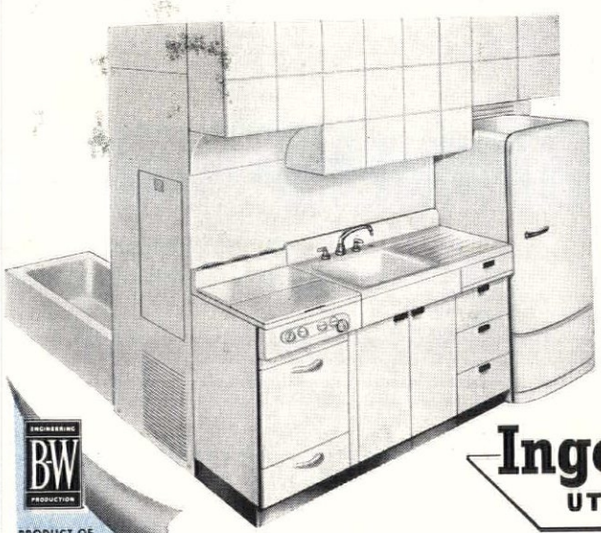
5. Because the Ingersoll Utility Unit comes in one space-saving package, the architect can deliver a roomier, more attractive home at a low cost.

Small Homes Designed by L. Morgan Yost Show How the Ingersoll Utility Unit Saves Floor Space Without Restricting Creative Design

"I have used Ingersoll Utility Units in many of my small home designs," says Mr. Yost, well-known architect of Kenilworth, Illinois. "I find they are easily adaptable to an amazing variety of attractive floor plans, and always result in a saving of valuable space. They save time in planning and in making up specifications, and they simplify the contractor's problem of procuring and installing all the fixtures and equipment that are included here in a single unit."



L. Morgan Yost
Kenilworth, Ill.



The Ingersoll Utility Unit is a single engineered assembly which includes Kitchen, Bathroom, Heating Plant and all plumbing and electrical connections. Nothing extra need be specified. All fixtures and appliances are included.

Ingersoll
UTILITY UNIT
TRADE MARK

INGERSOLL STEEL DIVISION • Borg-Warner Corp., Chicago

PRODUCT OF BORG-WARNER

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Borg-Warner Corp., Dept. F4
310 S. Michigan Ave., Chicago 4, Ill.

Please send me the illustrated brochure about the Ingersoll Utility Unit.

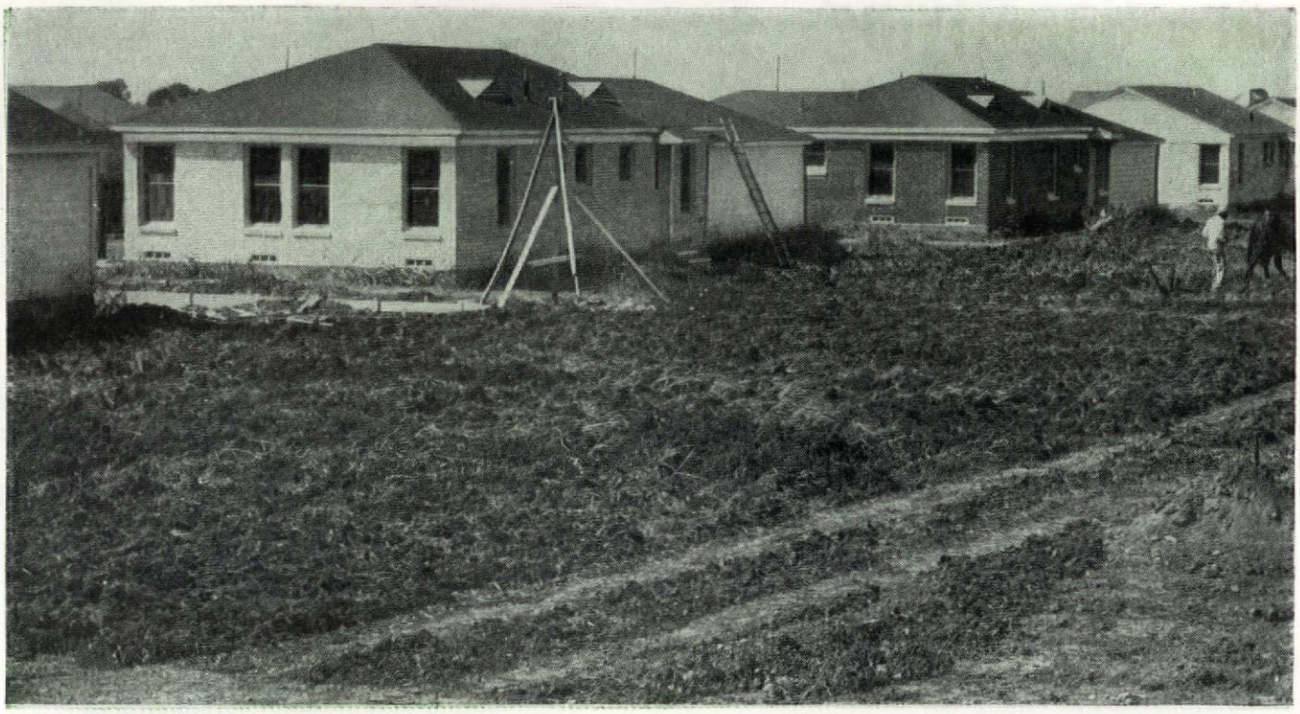
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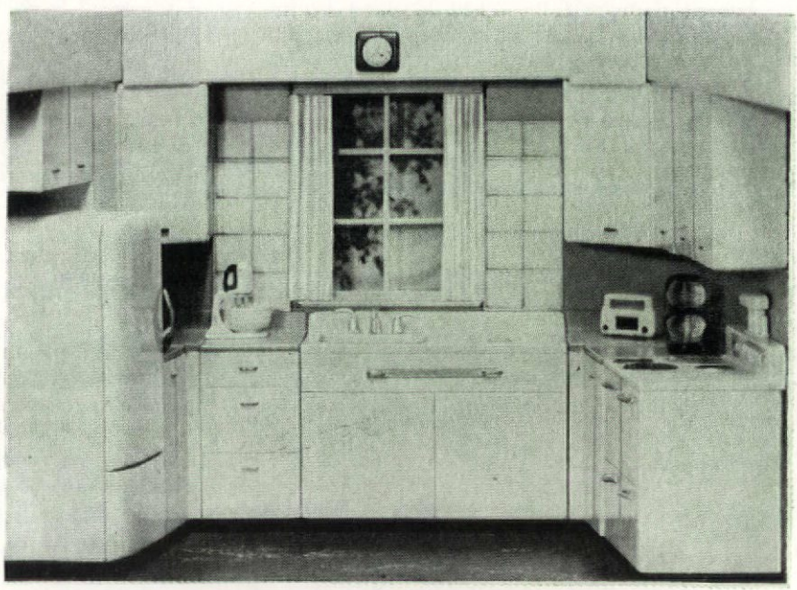
City.....State.....

They can't be built?



There's a promise of better living in these Dallas homes, being built by Allan Graham. General Electric kitchens—included as a basic part of the home—will offer homeowners all the advantages and economies of modern, efficient, labor-saving appliances.

G-E EQUIPPED HOMES



This typical kitchen in one of Allan Graham's homes is planned for ease and convenience. The General Electric Sink—with Dishwasher and Disposall (for automatic garbage disposal), General Electric Range, Refrigerator, and Steel Storage Cabinets—are all included in the long-term realty mortgage. They make only a minor difference in initial cost, and the slight increase in monthly payments can be more than offset by economies in operation and maintenance of the dependable General Electric Equipment.

We're BUILDING them!

Says Allan Graham of Dallas, Texas:

"We're building homes to sell for less than $10,000— with complete all-electric kitchens containing the latest General Electric equipment!"

YOU PROBABLY know that home-buyers today have their hearts set on fully equipped, all-electric kitchens included as part of the house itself.

But do you think that such homes can't be built except in the higher-price class—out of reach of the volume market?

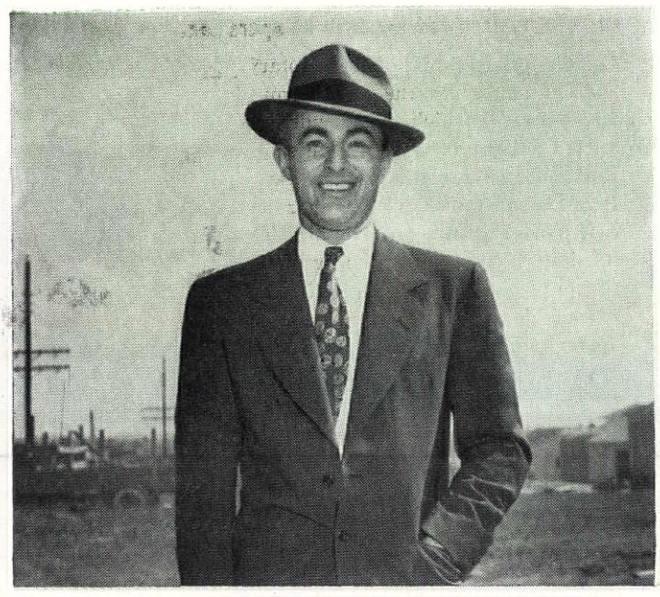
They can be built . . . as builder after builder is proving.

Here's what Allan Graham of Dallas, Texas, says about his new houses:

"Under our loan plan, the extra cost of including a modern, efficient, all-electric kitchen isn't more than $2.50 to $3.00 a month to the buyer.

"On that basis, who wouldn't favor the type of home I'm building. I can offer complete General Electric equipment—Range, Refrigerator, Automatic Dishwasher, Disposall,* General Electric Steel Storage Cabinets, and an Attic Fan—built right into the house and included in the finance plan!

"With top-quality equipment like this—inexpensive to operate and maintain—it can really cost the owner less per month, in terms of actual outlay, than if he had had to buy his own equipment."



Allan Graham—progressive and foresighted Dallas builder—believes that the days of selling homes with bare, unequipped kitchens are passing. His conviction is that a home with a complete General Electric Kitchen is a better bet for the builder and a better buy for the homeowner.

Choose your all-electric equipment wisely

In selecting equipment for the homes you may design or build, it's important to remember that your reputation rests—in part—on the *quality* of equipment you install, and the *service* it renders.

That's one reason it's wise to choose General Electric Appliances! For most people would buy General Electric for themselves. Recent surveys show that 53% of all women, and 51% of all men, prefer General Electric to any other appliances. This preference is more than twice that for the next leading brand.

Let us help you with your plans

The experience of General Electric in working with architects and builders on projects of this kind may be of value to you in your own developments.

For complete information, write to General Electric Home Bureau, General Electric Company, Bridgeport 2, Conn.

THE APPLIANCES MOST WOMEN WANT MOST

GENERAL ELECTRIC

*Trade-mark Reg. U. S. Pat. Off.

shelves for storing kitchen utensils. Overall size of the unit is 22½ in. wide, 14 in. deep, 42 in. high. Retail price is $89.95. *Manufacturer:* Landers, Frary & Clark, New Britain, Conn.

GIANT GAS RANGE for domestic use.



Built to meet the cooking requirements of large families, extensive entertainers, ranches, etc., Western-Holly's New Town and Country gas range is the first of its kind in the country. Fully automatic with clock control, it features eight gas burners and a large griddle on its 65 in. long top. Inside it provides two large ovens, a large "Broyl-oven" for barbecuing or broiling large cuts of meat, two separate broilers and a utility drawer. A plate-warming shelf extends the full length of the top and the cooking surface is illuminated with concealed lighting. According to the manufacturer, the new range provides more cooking facilities than two smaller type ranges, and combines the facilities in an appliance of distinguished appearance.

Manufacturer: Western Stove Co., 8536 Hays St., Culver City, Calif.

REFRIGERATOR for apartment and builder projects provides 6 cu. ft. storage capacity with minimum floor space.



Kelvinator's new Space-Saver refrigerator features a storage capacity of 6 cu. ft., yet uses no more floor space than previously required for 4 cu. ft. models. Designed for apartments and builder projects, the 50 per cent capacity increase has been achieved with new engineering and the addition of only 3⅞ in. in overall height. Interior of the box features easily cleaned, rounded corners, removable shelves, aluminum chilling tray and automatic lighting. Of one-piece welded construction, it is finished in porcelain enamel. The freezer unit has two fast-freezing shelves and is equipped with two aluminum ice trays and a self-closing plastic door. Ample storage space is provided for frozen foods. The sealed-in Polarsphere mechanism is trouble-free. Other features include Kelvatex insulation, natural draft, finned tube type condenser and refrigeration type motor with external overload protection relay. Motor is designed for 110 v., 50 or 60 cycle, single phase, AC. Over-all dimensions of the cabinet are: width, 24 1/16 in.; depth, 26⅞ in.; height, 55 3/16 in.

Manufacturer: Kelvinator Div., Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit, Mich.

IRONER is designed for ease of operation.



Combining features of the rotary and flat-plate types, the Bendix irons under the roll, which is suspended in a fixed position over a movable shoe. Roll, shoe and clothes move away from the operator and establish an easy flow of wrinkle-free ironing. To facilitate learning and ironing of intricate pieces, roll is two-speed. The retractable cast iron shoe can be drawn 4 in. away from the roll and is open on both ends. This enables garments to be easily arranged, allows ample room for pressing and permits the shoe surface to be readily cleaned. Dual thermostats provide low, medium and high heat for the shoe and permit either end to be heated independently. Release bar is in easy reach. Extending in front of the operator and parallel to the shoe, a slight touch releases the shoe and breaks the current. Another touch restores operation. Other features of the new unit include adjustable ironer height, fingertip and adjustable knee control, adjustable lap board, and ample shelves for holding ironed articles. In addition to ironing, the Bendix automatic ironer steams and presses. Deluxe model, now in production, is priced at $199.50.

Manufacturer: Bendix Home Appliances, Inc., South Bend, Ind.

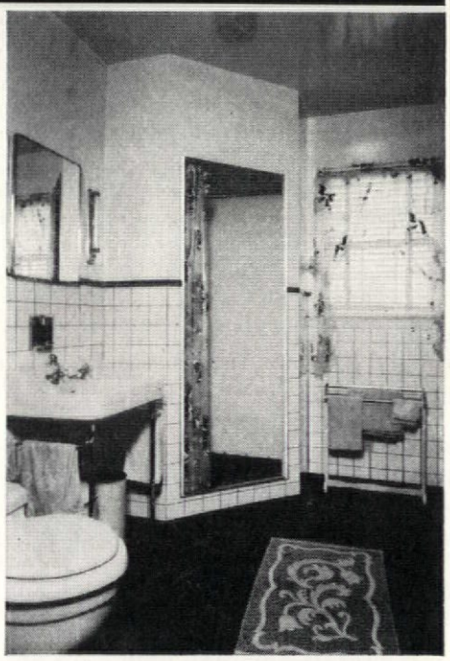
(Technical Literature, page 190)

HOW TO MEET THE DEMAND FOR SEPARATE SHOWER BATHS

Surveys show more than half the families planning to build want separate shower baths.

You can meet this rapidly growing demand by specifying Weisway Cabinet Showers.

Precision-built, leakproof Weisways are made in models suitable for homes in every price class.

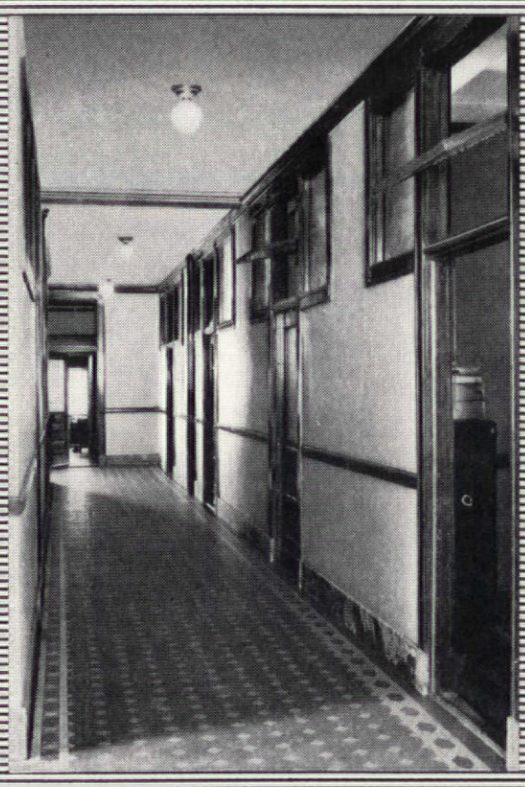


Weisway

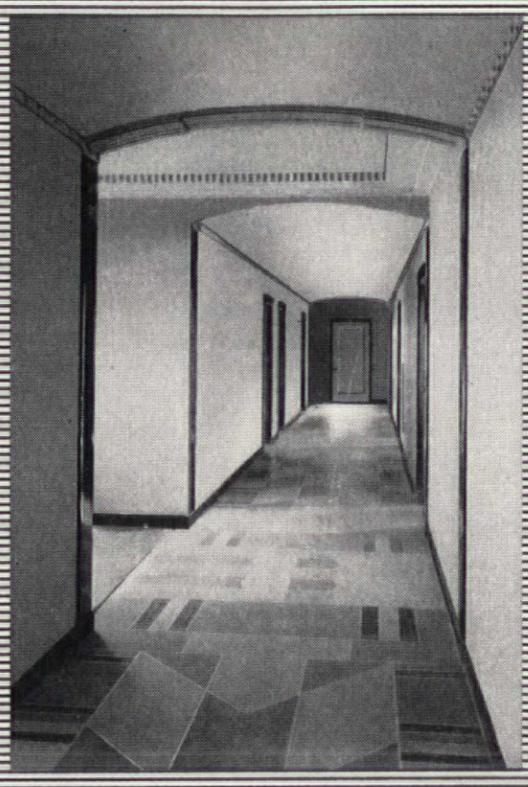
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Product of the pioneer manufacturer in this field, Weisways offer a thoroughly satisfactory answer to the insistent demand for separate shower baths. Quality-proved and service-tested through years of actual use, Weisways insure the owner's satisfaction, protect your reputation . . . you specify Weisways with assurance. Write now for detailed information about Weisway features, including the vitreous porcelain receptor with exclusive "foot-grip, no-slip" floor.

HENRY WEIS MFG. CO., INC., 402 OAK ST., ELKHART, IND.



Corridor of the Woodmen of the World Building, Omaha, Neb., before modernization was started



Same corridor after Carrier year-round air conditioning system had been installed

air conditioning puts new tenants in old buildings

Tenants of older commercial buildings are always on the lookout for newer, more modern space. This means lower occupancy for the aging building and often a less desirable type of tenant. Carrier air conditioning not only checks the drift of tenants away from older buildings . . . it attracts new ones, and makes even poorly located space rentable.

Year-round air conditioning by Carrier can be adapted to any type of existing commercial structure . . . office and loft buildings, hotels, apartments, department and retail stores, hospitals and others. Tested design assures proper temperature, humidity and circulation . . . freedom from objectionable dust and street noises . . . and provides positive, draft-free ventilation. Carrier systems are compact, quiet and economical.

The design and manufacture of dependable air conditioning systems and room units demand years of experience. Carrier engineers are the most experienced in the air conditioning field. They created air conditioning . . . and have teamed up for years with architects and consulting engineers to bring modern, efficient air conditioning to buildings of every type. Carrier Corporation, Syracuse, N. Y.

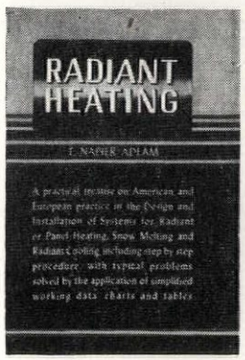
Carrier

air conditioning

refrigeration

industrial heating

TECHNICAL LITERATURE



RADIANT HEATING by T. Napier Adlam. The Industrial Press, 148 Lafayette St., New York. 472 pp. Illustrated. 6 in. by 9¼ in. Price $6.

The increasing popularity of radiant heating in this country has led to a rapidly expanding literature on the subject. Unfortunately, however, most of this valuable material has been unhandily dispersed through a wide range of technical papers, magazine articles and manufacturers' pamphlets. The need for a comprehensive study of the entire subject in book form has become increasingly apparent.

Mr. Adlam's new study is designed to meet precisely this need. Written by an engineer with some 30 years' practical experience in panel heating, it profits from the author's obvious devotion to his subject. Its organization is loose and somewhat discursive: at the same time, it contains such a wealth of illustrative material as to make it intelligible and interesting to almost anyone in the building field. Mr. Adlam has managed to include an immense amount of data, much of it new and some of it original. Thus, he has some interesting measurements on the effect of carpeting on radiantly heated floors. He offers all sorts of special applications: electric coils for de-icing outside stairs; radiantly-heated stadia (for both snow-removing and comfort considerations); and many practical guides to such factors as estimating pipe size, spacing and heat input, etc. In addition to a thorough discussion of current standards in the design, installation and control of radiant heating and cooling systems, using hot water, steam, air and electricity, Mr. Adlam has included a step-by-step design procedure.

PANEL HEATING AND COOLING ANALYSIS by B. F. Raber and F. W. Hutchinson. John Wiley and Sons, 440 Fourth Ave., New York. 208 pp. 5¾ in. by 8¾ in. Price $3.50.

Covering much the same ground as the Adlam book but in a much denser, more compact fashion, the Raber-Hutchinson study is the work of two professors of mechanical engineering and clearly reflects that fact. It is primarily a textbook for advanced and graduate students. Although there is an introductory section in popular terms, Professors Raber and Hutchinson confine themselves there to a cautious estimate of the mechanical, esthetic and comfort advantages and limitations of panel heating and cooling. They then proceed to "a detailed and rigorous treatment of the theory of radiant exchange and the mathematical analysis of radiant panel heating and cooling systems." The study concludes with the authors' own "equivalent conductance" theory and a recommended design procedure based upon it. Altogether, this study constitutes perhaps the most precise and detailed *theoretical* analysis of the subject yet to appear.

AUTOMATIC CONTROL OF RADIANT PANEL HEATING: A Manual of Theory and Application. Minneapolis-Honeywell Regulator Co., 2747 Fourth Ave., So., Minneapolis, Minn. 40 pp. 8¼ in. by 10¾ in. Price $1.

Designed specifically for the heating engineer and confined—as the title indicates—to radiant controls, the Minneapolis-Honeywell study also is a valuable contribution. The booklet points out that "the inherent performance characteristics of a panel system give rise to control problems which are to a high degree peculiar to panel heating." In addition, there is the fact that, since panel systems are an integral part of the finished structure, pre-design of automatic controls is even more important than in conventional systems. Hence the study devotes some space to a discussion of the relation between design and control before it proceeds to a series of generalized control-system diagrams for various typical radiant installations (single- and multiple-zones, electrical and pneumatic controls, etc.).

LIGHTWEIGHT AGGREGATES. Lightweight Aggregates for Concrete. Office of the Housing Expediter, Washington 25, D. C. 24 pp. 7⅞ in. by 10 7/16 in.

This pamphlet presents specific information on six lightweight aggregates for concrete: expanded shale or clay (Haydite), expanded slag, pumice, diatomite, perlite, and vermiculite. Obtained as the result of a nation wide survey conducted by the National Housing Agency, the data for each type of aggregate include: method of manufacture, weight of material, number of manufacturers, average price, annual production, etc. Tables for each aggregate list name, address and plants of reporting firms and show the size and weight of the product as marketed commercially. Another table gives range of weights achieved using different aggregates to make different weights of concrete. Maps show locations of the various aggregate plants.

(Continued on page 194)



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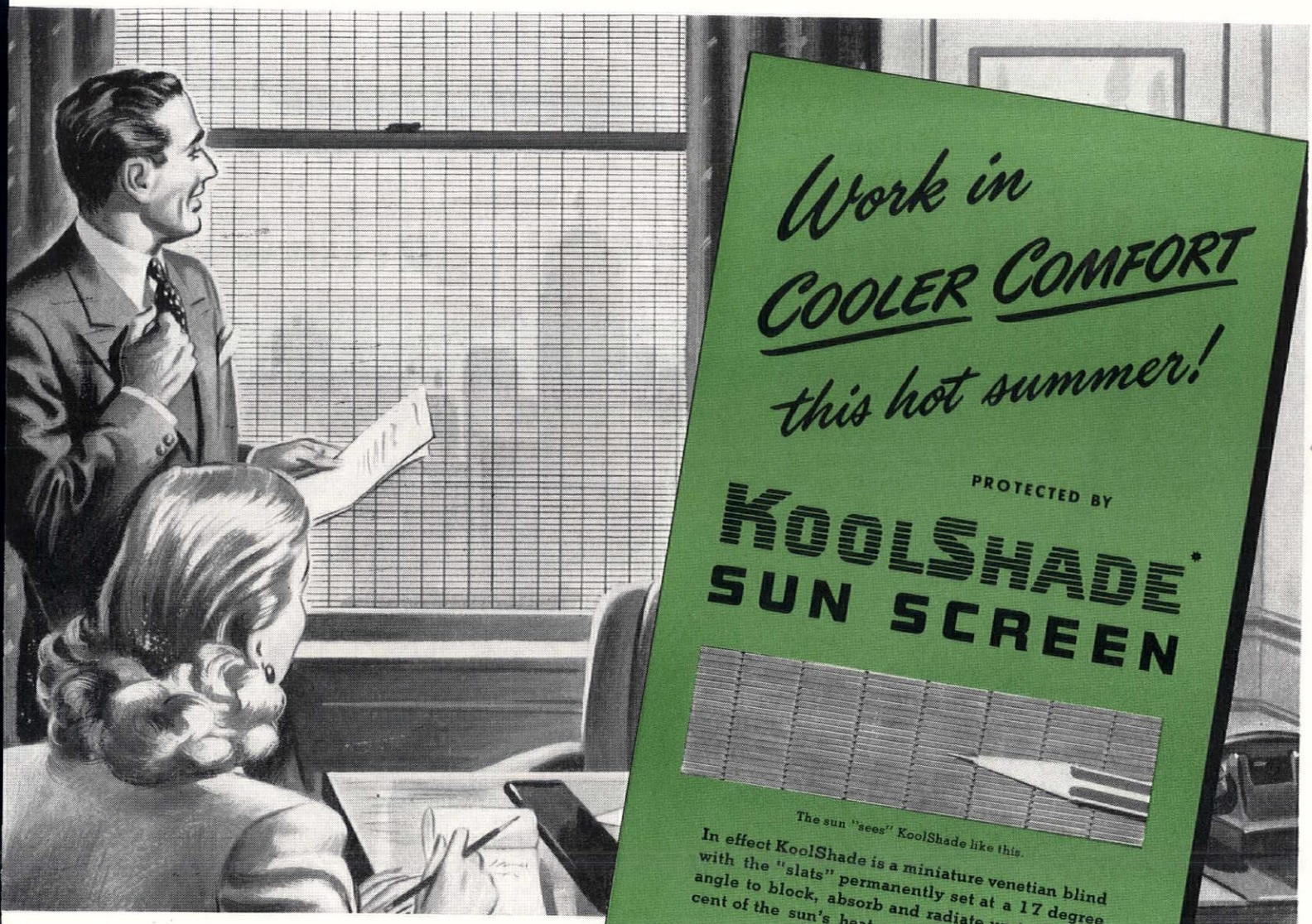
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The sun "sees" KoolShade like this.

In effect KoolShade is a miniature venetian blind with the "slats" permanently set at a 17 degree angle to block, absorb and radiate up to 90 per-cent of the sun's heat rays outside the window.

Your office can be as much as 15° cooler... *on the hottest days!*

Summer will soon be here, and with it—*blazing heat!* Don't endure another season of sweltering misery when a KoolShade installation can assure you cooler comfort all summer long. KoolShade makes sun-exposed rooms as much as 15 degrees cooler by blocking and radiating up to 90% of the sun's heat rays *outside your window!* Yet vision from inside is crystal clear, and there's an abundance of glareless light!

KoolShade is easily installed like ordinary insect screen. It requires no maintenance . . . will never rot, rust or rattle. Keeps out insects, too. Order KoolShade *now* to assure installation before hot weather begins. It will pay you big dividends in personal comfort and working efficiency!

NOTE THESE VALUABLE FEATURES

- *Permanently set at 17° angle for greatest shading efficiency.*
- *Prevents the fading of valuable drapes and furnishings.*
- *Easy and inexpensive to install—will not rot, rust or rattle.*
- *Fits neatly and smoothly into modern architectural design.*
- *Durable bronze KoolShade also effective as insect screen.*

MAIL THIS COUPON TODAY FOR COOLER COMFORT ALL SUMMER! ➡

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CUTS AIR CONDITIONING COSTS ... INCREASES EFFICIENCY

KoolShade Sun Screen is the most efficient shading device known to air conditioning engineers! Where air conditioning systems are in use, KoolShade reduces operating costs. On new air conditioning installations an excellent cooling job can be done with less expensive equipment when KoolShade is used on all sun-exposed windows.

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Please send free sample and literature, also the name of my nearest KoolShade distributor.

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Ingersoll KOOLSHADE* SUN SCREEN

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What about built-in gutters?



...Turn to page 62 in Revere Manual* of Sheet Copper Construction

COPPER and COMMON SENSE

SELDOM has a publication by a manufacturer received as wide a welcome as Revere's 96-page manual on sheet copper construction. The chances are you already have a copy, but if not, write for it now while there are still a few available. On questions of sheet copper construction you will find it gives the answers—complete.

On box gutter linings for built-in gutters, for example, there are six pages of details and text. Here, as elsewhere throughout the book, you get the latest, most authoritative facts on the best ways so far developed for designing and carrying out sheet copper construction. It is based on Revere's famous program of sheet copper research in which wholly new facts were discovered which reduce this type of construction to a matter of engineering design.

Checked and endorsed by leading architects and experienced sheet metal experts, the charts, details and information in this booklet are designed for practical men to use in solving their day-to-day problems.

Here is a simple, direct guide to longer lasting, more trouble-free sheet copper construction. It will always pay you to turn to this booklet first. Complimentary copies have been sent to all holders of Sweet's Architectural File, and, through Revere Distributors, to the majority of the sheet metal contractors throughout the country. For any further help you may wish, call on the Revere Technical Advisory Service, Architectural. Revere products are sold by Revere Distributors in all parts of the country.

**Entitled "Research Solves Problems of Stress Failures in Sheet Copper Construction."*

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230 Park Avenue, New York 17, New York

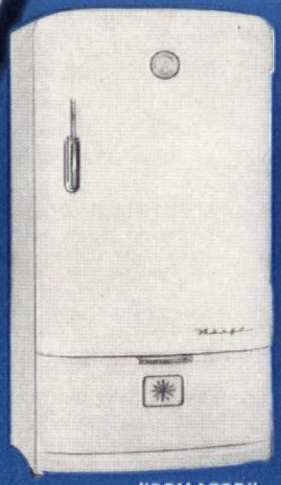
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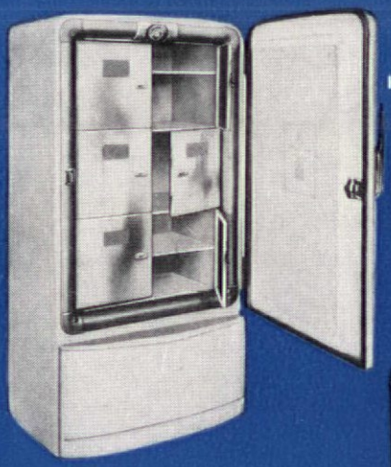
COMPLEMENT THE BEST EFFORTS OF ARCHITECTS AND BUILDERS



"ROLLATOR" REFRIGERATORS



ELECTRIC RANGES



HOME AND FARM FREEZERS



"RO-TA-TOR" WASHERS

HOME HEATERS





GAS RANGES

Norge is the trade-mark of Norge Division, Borg-Warner Corporation, Detroit 26, Mich. In Canada: Addison Industries, Ltd., Toronto, Ont.

SEE NORGE BEFORE YOU BUY

TECHNICAL LITERATURE



SOUND SYSTEMS. School Sound Systems. The Radio Manufacturers Association, 1317 F St., N. W., Washington, D. C. 32 pp., 8½ in. x 11 in.

This summary of basic standards for school sound systems is offered as a guide in the selection and utilization of sound equipment. A product of intensive study completed by the U.S. Office of Education and The Radio Manufacturers Association Joint Committee on Standards for School Audio Equipment, the booklet should be helpful in the planning and installation of varied types of classroom equipment and central radio-sound systems. Non-technical in language, it explains what a school may obtain and what specifications it should insist upon in ordering either a complete sound system or a partial setup. At the same time it gives the radio manufacturer minimum basic standards which his equipment must meet to comply with modern requirement for school sound systems and their components. Conten are divided into four sections: Origin of Basic Standard Utilization of School Sound Systems; Specifications f School Sound Systems and Installation Considerations. Di gram illustrates suggested functional installation for Built- School audio facilities and typical program logs are offere as illustrations of good sound system utilization.

ELECTRICAL CODE. National Fire Codes Vol. V, Nation Electrical Code, 1947 Edition. National Fire Protection Ass ciation, 60 Batterymarch St., Boston, Mass. 408 pp. 6 in. 9 in. Price $2.00.

Superseding the 1940 edition and published as Vol. V, th 1947 edition of the National Electrical Code is intended f library and desk reference purposes. Useful for producin installations that are reasonably safe from electrical fires an accidents, the code is a collection of rules governing the insta lation, and to an extent, the use of electrical equipment. specifies the exact manner in which electrical materia devices, fittings and appliances should be installed and mai tained within or on public and private buildings and oth premises. It also includes examples, an index of all NFP publications relating to various sections of the code and a advertising section of approved products. A pocket si edition with similar code text is available for use on the jo

LAMPS. G-E Bulletin LD-1 by C. E. Weitz. General Electr Co., Nela Park, Cleveland, Ohio. 76 pp. 8½ in. by 11 i Price $.40.

A condensed text on the design and operation of incandescen mercury and fluorescent light sources, Bulletin LD-1 contai important technical data from articles published by G.E. Lamp Department. It also features latest lamp developmen and their practical applications to commerce, industry an the home. Such topics as lamp economics; temperature voltages; auxiliary equipments; miniature, germicidal, infr red, photoflash, sunlamps and glow lamps are discussed an amply illustrated with photographs, diagrams and charts.

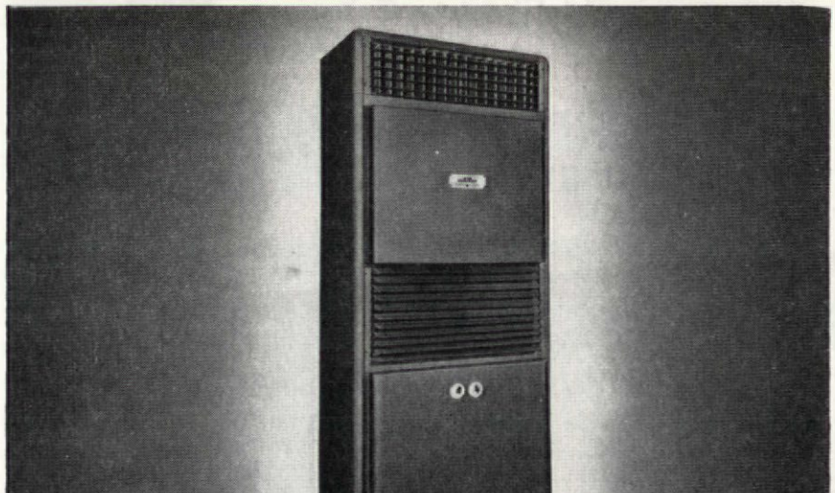
KITCHEN EQUIPMENT. Your Kitchen and You. St. Charl Manufacturing Co., St. Charles, Ill. 16 pp. 8½ in. by 11 i Price $.10.

This booklet covers design, construction, types, advantag and other features of St. Charles custom-built kitchen Designed for appearance and utility, these steel kitchens co sist of sink, cabinets and work surfaces. Step-by-step illustr tions trace building procedure from original measureme and design of kitchen, through equipment manufacture, final installation. Many types of wall, base, drawer and fu height units and special purpose units such as corner, divide combination, etc., are illustrated and described. Other se tions feature accessories—shelves, trays, racks, drawers, bin etc.—and construction of the one-piece work surface. Th booklet is free to architects making request on their letterhea

LAUNDRY EQUIPMENT. Does Your Home Have A Place F Living. Home Laundry Equipment Div., General Electric Co Bridgeport, Conn. 24 pp. 13½ in. by 10⅝ in. Price $.10.

Predicting that a change is about to take place in hom laundry design, this booklet features utility areas in whic activities such as laundering, sewing, hobbies, etc. could b combined. Colored sketches and plans present 10 suggestion for combination laundry and kitchen, sewing room, kitche entry, maid's room, playroom and sunroom. Designs are bui around GE's laundry equipment which is described in anothe section.

(Continued on page 19



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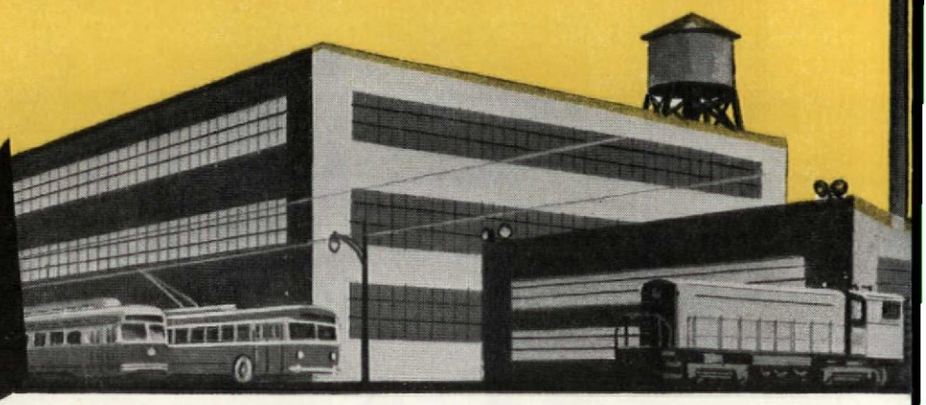
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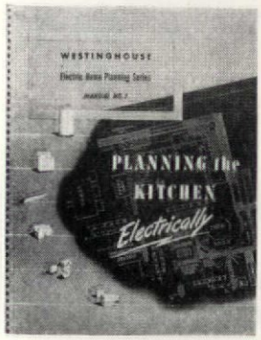
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KITCHEN PLANNING. Planning The Kitchen Electrically. Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh, Pa. 74 pp. 8½ in. by 10⅞ in. Price $1.

Planning The Kitchen Electrically is the first of a series of manuals giving practical data on space requirements and construction details for accommodating electrical equipment in the home. Discussing the fundamentals of kitchen planning and establishing storage and counter requirements according to the size of the house, the manual divides homes into 4 series. These cover various sizes of homes and varying degrees of electrification. The booklet then develops 16 different kitchen layouts for each of the 4 series. After determining the proper kitchen series, the designer selects one of the 16 layouts from a key plan sheet. Detailed layouts follow the key plans, listing equipment required for the particular kitchen arrangement. Following chapters are devoted to design details, kitchen ventilation, lighting, electrical outlets and circui The established rules are then applied to 4 specific hou plans: Thrift, Budget, Ideal and Deluxe, each one taki advantage of an added number of electrical convenienc Final section illustrates and describes the Westinghou products used in the recommended kitchen plans.

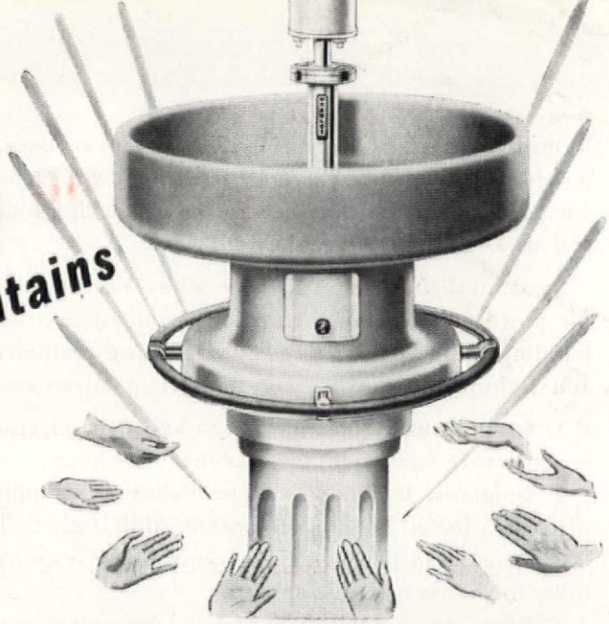
PACKAGED MORTGAGE. Urban Mortgage Finance, Readi List No. 1, The Packaged Mortgage, A List of Selected Refe ences. Federal Housing Administration, Washington, D. C. 8 p 8½ in. by 10½ in.

The first of a series of selective reading lists in the field urban mortgage finance, this booklet lists articles which ha appeared on the subject of "The Packaged Mortgage." Th term applies to "a single mortgage transaction to finance completely developed home site, with a completely planne developed, equipped and ready-to-live-in home upon i Other lists on Home Financing Plans, Construction Loa The Mortgage Market, etc., will follow.

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Donald Z. Bailey, architectural student, P. O. Box 378, Ya Station, New Haven, Conn.

Weich & Bingham, architects and engineers, 303 American Tru Building, Middletown, Ohio.

Jim DeTray, designer, 2024 Adams St., Toledo, Ohio.

H. Guy Holt & Partners, architects, surveyors, town planni consultants, Commerce House, 8 Blagrave St., Reading, Englan

Julian Keyes, architect, 22 Claremont Park, Finchley, Lond N.3, England.

Albert W. Kirschenbaum, architect-engineer, 53 West Jacks Boulevard, Chicago, Ill.

Anthony C. Lewis, architect, Non-Pareil, Hastings, Barbad B.W.I.

Rorert B. Murphy, architect, 672 North Orange Ave., Orlando, Fl

Herbert Voelcker & Associates, architects, 2801 San Jacin Houston, Texas.

REQUESTS FOR INFORMATION

Nelson L. Burbank, author, 5735 Wintrop Ave., College Hi Cincinnati, Ohio, desires good black and white details of rece developments in dwelling construction.

Hewins-Drew Co., realtors and builders, 3150 Stevens Creek Rd San Jose, Calif., requests data on the development of suburb shopping centers and neighborhood planning.

W. C. Kerney, 1634 C John St., Evansville, Ind., desires informati on all types of residential building materials.

M. Kammourieh, architect, Sarkis St., Beyrouth, Syria, desir catalogs on modern building materials and equipment includi plumbing, ventilating and decorating.

Wm. McBain, architect, 46 St. George St., Toronto, Canada, desir catalogs on all building materials, particularly those to do wi apartment construction.

Harlan D. McIntyre, designer, Grand Rapids Store Equipme Co., 1340 Monroe Ave., N.W., Grand Rapids, Mich., requests info mation on store designing, retail planning, decorating, floor co erings, materials for temporary wall and ceiling construction.

Boyd E. Roberte, Box 2498 V, G.P.O., Elizabeth St., Melbourn Australia, desires data on materials for industrial construction.

N. E. Viviano, appliances, 49 North St., Catskill, N. Y. desir literature on all gas, electric and oil appliances, fixtures and fittin for plumbers and steamfitters.

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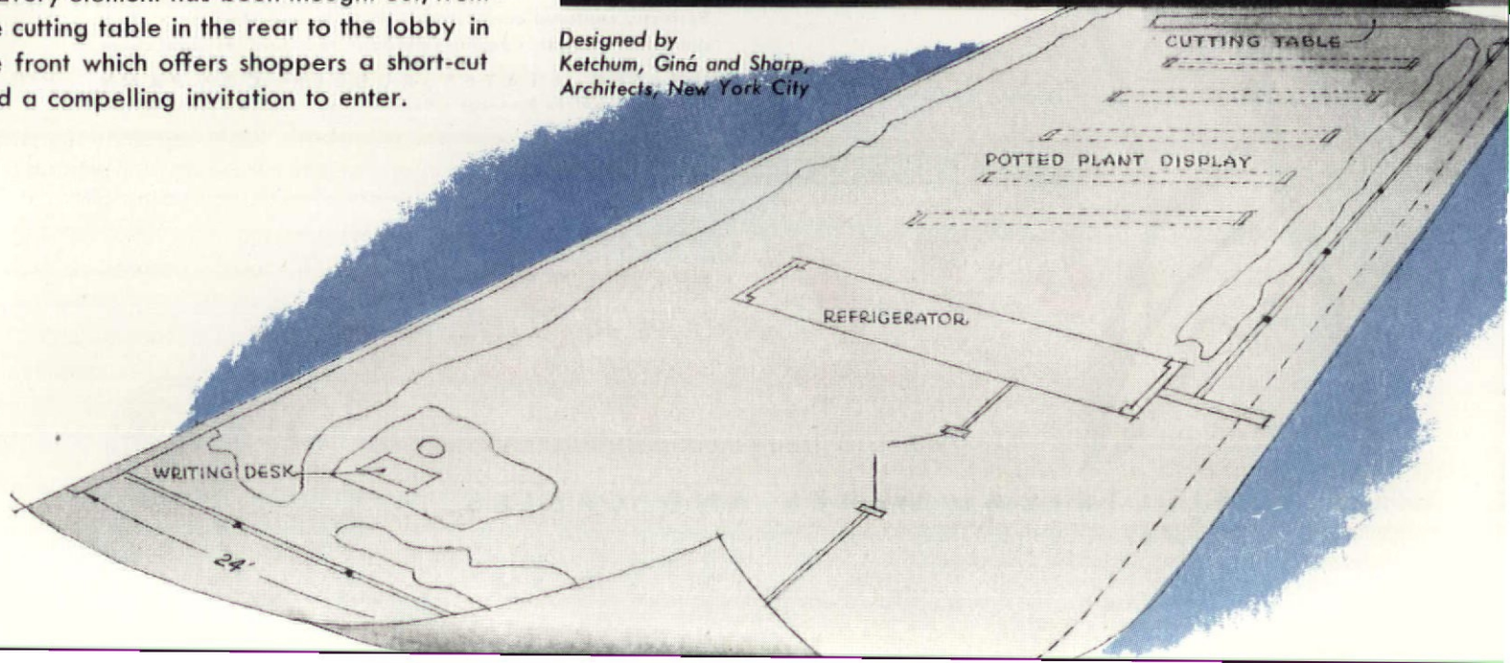
Today's new and realistic trend in store design is based on common sense, research, and imagination.

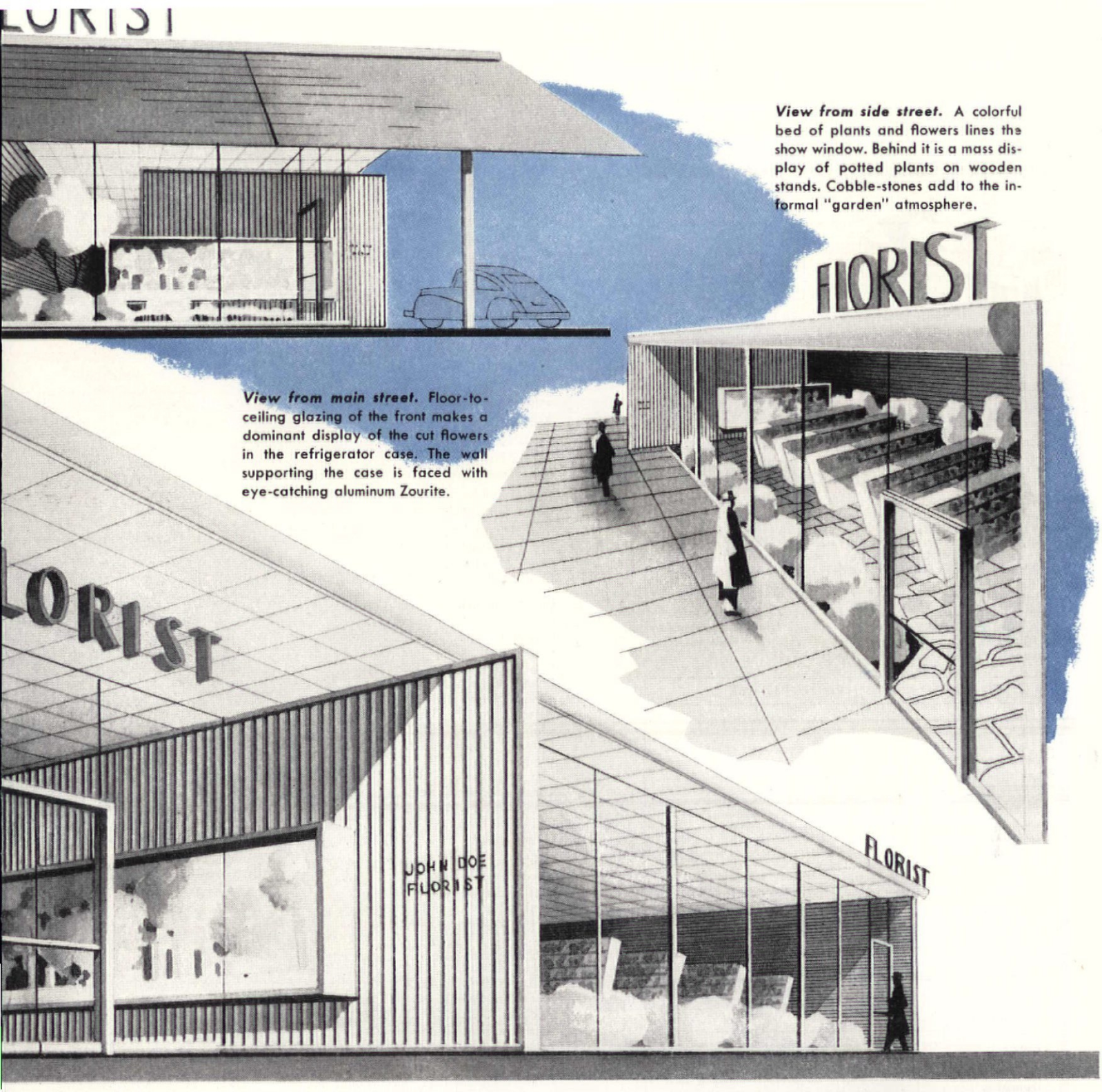
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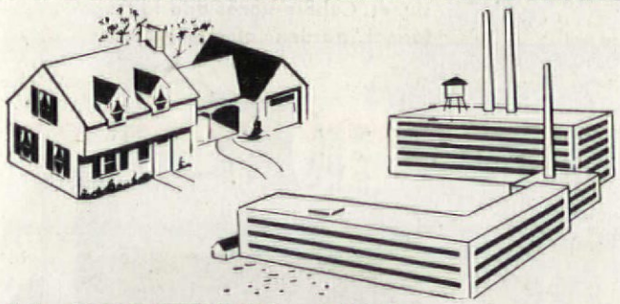
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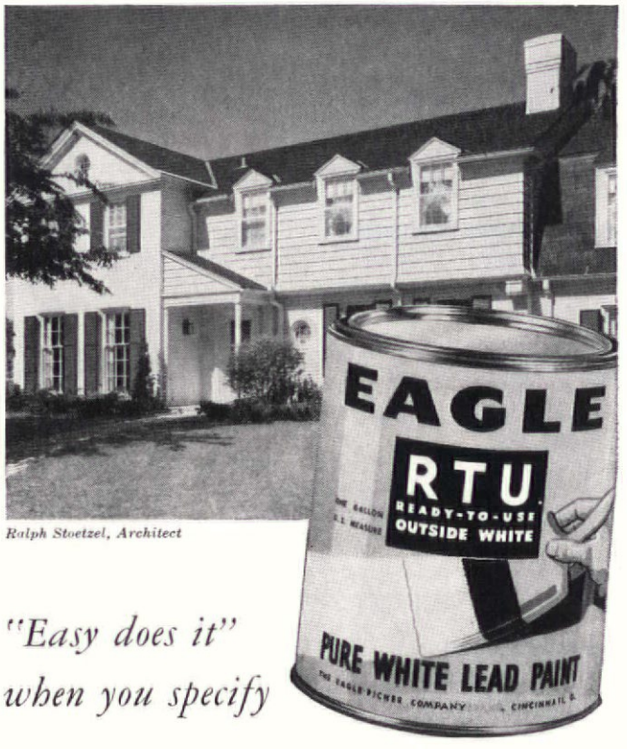
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Ralph Stoetzel, Architect

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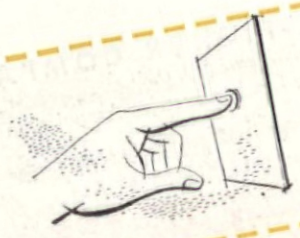
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PUSH A BUTTON . . . SOLVE A PROBLEM!

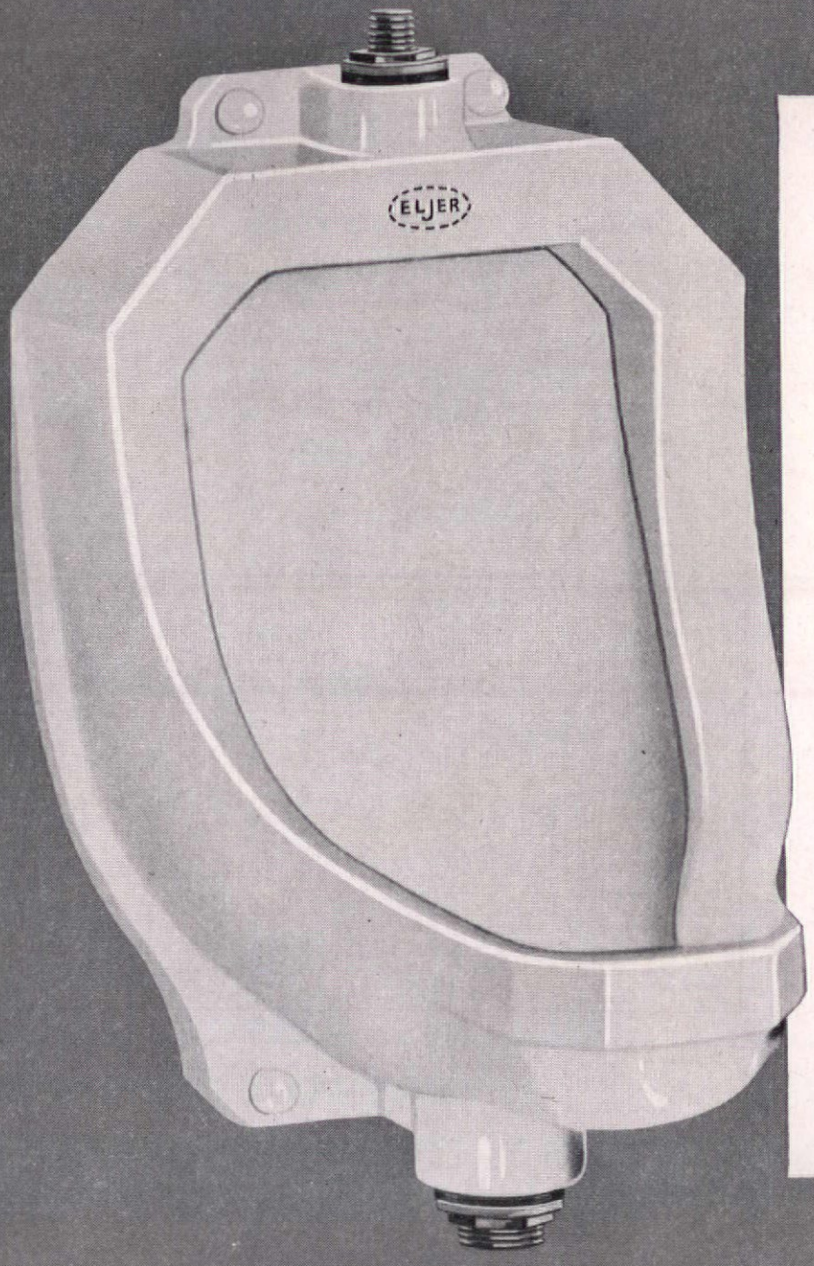
For your complimentary copy of the rental-building story of Selectomatic, "Push A Button —Solve A Problem", write to the Westinghouse Electric Corp., Elevator Division, 150 Pacific Avenue, Jersey City 4, New Jersey, on your letterhead please.

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